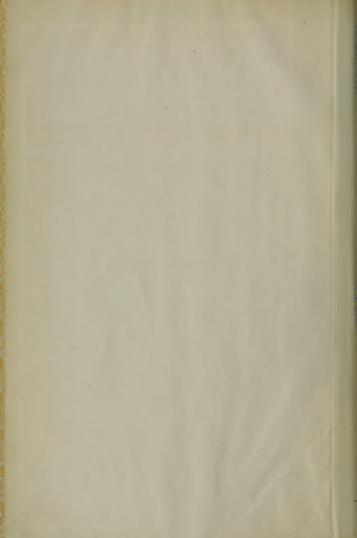








Alteropie PeriodicaLa





A Monthly Review of Municipal Problems and Civic Improvements
OFFICIAL ORGAN OF THE LEAGUE OF CALIFORNIA MUNICIPALITIES



CORONADO LIBRARY—CORONADO—CONVENTION CITY 1923
LEADING ARTICLES IN THIS ISSUE

PUBLIC OWNERSHIP THE ONLY SOLUTION

By Chief Justice Walter Clark

PORTLAND CEMENT CONCRETE ROADS

Extracts from Government Bulletin

THE PROBLEMS OF A CITY MANAGER

By Clyde L. Seavey.

Publication Office Pacific Building, San Francisco, Cal. Two Dollars a Year



The Skid-Proof Road

-is Concrete.

Its even, firm, gritty surface prevents slipping even in wet weather.

It is the necessary complement to good tires and good brakes, for complete responsiveness in your car.

More and more motorists are insisting on Concrete roads—and motorists can get the kind of roads they insist on.

> Send for our free booklet R-3, Facts about Concrete Roads

PORTLAND CEMENT ASSOCIATION

785 Market Street 548 South Spring Street SAN FRANCISCO, CALIF. LOS ANGELES, CALIF.

A National Organization to Improve and Extend the Uses of Concrete

Offices in 22 Other Cities

Pacific Municipalities

AND COUNTIES 209667

OFFICIAL ORGAN OF THE LEAGUE OF CALIFORNIA MUNICIPALITIES

Entered as second-class matter March 22, 1913, at the Post Office at San Francisco, California, under the act of March 3, 1879.

\$70	T	XXXVII	

TWENTY-SIXTH YEAR

No. 1

EDITORS			١.						H.	A.	MA	SON	and	WM.	J.	Loc	KE
.F. 11 . 1 . 1	1	D		200				Til	 C1	D	1 10	D	11.11		E		

ADVERTISING RATES ON APPLICATION

Address all Communications to "PACIFIC MUNICIPALITIES," Pacific Building San Francisco, California

JANUARY 1923

NOTICE—Every city belonging to the League of California Municipalities is entitled to a copi of this magazine for each of its officials without extra charge. If not received kindly notify the Secretary.							
A. Carlisle & Co., Printers, San Francisco							
CONTENTS							
PUBLIC OWNERSHIP THE ONLY SOLUTION By Chief Justice Walter Clark	Page 3						
PORTLAND CEMENT CONCRETE ROADS Extracts from Government Bulletin	9						
THE PROBLEMS OF A CITY MANAGER By Clyde L. Seavey	15						
A MODEL BUILDING ORDINANCE By C. W. Mitchell	19						
PROPORTIONAL REPRESENTATION By Cameron H. King	22						

LEGAL POINTS THAT ENGINEERS AND COUNCILMEN SHOULD KNOW

By	Charles N.	Kirlshvida		
Dy	Charles IV.	KIFKDFIGE		

LEAGUE OF CALIFORNIA MUNICIPALITIES

Organized 1897 Affiliated with the Bureau of Municipal Reference, University of California

OFFICERS

President, FRANK C. MERRITT, Assistant City Clerk of Oakland First Vice-President, FRED C. WHEELER, City Councilman of Los Angeles First Vice-President, Stabl C. Wille-Libr, City Councilian of Los Angues
Second Vice-President, NORMAN E. MALCOLM, City Attorney of Tala Alta
Secretary-Treasurer, H. A. MASON, Bond and Ordinance Expert of the City of San Francisco
Executive Secretary, Wh. J. LOCKE
Headquarters: Pacific Building, San Francisco
Official Printers: A. Carliale & Co., San Francisco

INFORMATION BUREAU

The League of California Municipalities maintains in connection with the Secretary's Office, a Bureau for fournishing city and town officials with information on municipal affairs, and loaning copies of new ordinances and specifications. Officials are urged to make a free use of this Bureau. Kindy send a self-addressed stamped envisope in all cases.

Members of the California League of Municipalities

Alameda	Corte Madera	Jackson	Orland	Santa Ana
Albany	Crescent City	Kennett	Oroville	Santa Barbara
Alhambra	Culver City	King City	Oxnard	Santa Clara
Alturas	Daly City	Kingsburg	Pacific Grove	Santa Cruz
Amador City	Davis	Lakeport	Palo Alto	Santa Maria
Anaheim	Delano	Larkspur	Pasadena	
Angels	Dinuba	La Mesa	Paso Robles	Santa Monica
Antioch	Dixon	La Verne	Patterson	Santa Paula
Arcadia	Dorris	Lemoore	Petaluma	Santa Rosa
Arcata	Dunsmuir	Lindsay	Piedmont	Sausalito
Arroyo Grande	Eagle Rock	Lynnwood	Pinole	Sawtelle
Auburn	East San Diego	Livermore	Pittsburg	Sebastopol
Avalon	El Cajon	Lodi	Placerville	Selma
Azusa	El Cerrito	Lompoc	Pleasanton	Sierra Madre
Bakersfield	Elsinore	Long Beach	Plymouth	Sisson
Banning	El Segundo	Los Angeles	Point Arena	Soledad
Beaumont	Emeryville	Los Banos	Pomona	Sonoma
	Etna	Los Gatos	Porterville	Sonora
Benicia	Eureka	Loyalton	Potter Valley	South Pasadena
Berkeley	Exeter	Madera	Red Bluff	South San Francisco
Beverly Hills	Fairfield	Manhattan Beach		St. Helena
Biggs	Ferndale	Manteca	Redlands	Stockton
Bishop	Fillmore	Maricopa	Redondo Beach	Suisun
Blythe	Fort Bragg	Martinez	Redwood City	Sutter Creek
Brawley	Fort Jones	Marysville	Reedley	Sunnyvale
Brea	Fortuna	Mayfield	Rialto	Susanville
Burbank	Fowler	Merced	Richmond	Taft
Burlingame	Fresno	Mill Valley	Rio Vista	Tehachapi
Calexico	Fullerton	Modesto	Riverside	Tracy
Calipatria	Gilroy	Monrovia	Roseville	Tulare
Calistoga	Glendale	Montague	Ross	Turlock
Carmel-by-the-Sea		Montebello	Sacramento	Ukiah
Chico	Gridley	Monterey	Salinas	Upland
Chino	Gustine	Monterey Park	Sanger	Vacaville
Chula Vista	Hanford	Morgan Hill	San Anselmo	Vallejo
Claremont	Hayward	Mountain View	San Bernardino	Ventura
Clovis	Healdsburg	Napa	San Bruno	Venice
Coalinga	Hemet	National City	San Diego	Visalia
Colfax	Hercules	Needles	San Fernando	Walnut Creek
Colton	Hermosa Beach	Nevada City	San Francisco	Watsonville
Colusa	Hollister	Newman	San Gabriel	Watts
Concord	Holtville	Newport Beach	San Juan	Wheatland
Corcoran	Honolulu	Oakdale	San Jose	Whittier
Corning	Huntington Beach		San Loandro	Willits
Coronado	Huntington Park	Oceanside	San Luis Obispo	Willows
Compton	Hyde Park	Otai	San Marino	Winters Woodlan
Corona	Imperial	Ontario	San Mateo	Yreka Yuba Cit
Covina	Inglewood	Orange	San Rafael	Total 2
	A STATE OF THE STA	O' mulgo	Con Linings	100ai 2

Associate Members-Oregon: Albany, La Grande

Pacific Municipalities

AND COUNTIES

OFFICIAL ORGAN OF THE LEAGUE OF CALIFORNIA MUNICIPALITIES
Entered as second-class matter March 22, 1913, at the Post Office at San Francisco, California, under
the Act of March 3, 1879.

PUBLIC OWNERSHIP THE ONLY SOLUTION

Renewal of Trouble Over Railroads, Mines and Other Utilities Inevitable

So Long As Private Operators Control Them: Public

Plundered of Millions.

By Chief Justice Walter Clark. (Reprinted from La Follette's Magazine)

Chief Justice Walter Clark, Raleigh, N. C., is one of the most fearless outspoken judicial leaders in the nation. He has not shut his eyes to the economic obliquities about. In this article he charges that the millions that have been made out of the coal mines and public utilities could not have been made legally. Public ownership of utilities is believed by him to be the solution of strikes and price hold-ups. Admitted to the bar in 1863, he was judge of the superior court of North Carolina, 1885-1889, judge of the supreme court from 1889-1902 and since January 1, 1903, has been chief justice of the supreme court of North Carolina. He is the author of several volumes on legal and historical subjects and is a contributor to many leading magazines.—Editor's Note.

Whatever the result of the great strike in the coal mines and on the railroads in 1922-whether it is a compromise or is a defeat for either side—it will not be a finality. On one side there will be still ranged the power of vast masses of wealth, the real owners (for the minority stockholders do not count) who are conscious of their unlimited power, and determined to use it; and on the other side are arranged the millions of men with wives and children dependent on them, who know that they are absolutely in the power of these great corporations who can fix their wages and therefore their conditions of living at will.

In this condition a renewal of the battle from time to time is inevitable.

The Meaning of the Great Strikes of 1922

It is self evident that whoever owns or controls the consolidated coal mines, water powers and railroads-the fuel, the lights and the transportationof a country is the master of its people. When these were owned by small and competitive corporations the injury sustained from them was the building up of great aggregations of capital. But today the small body of "Associated Railway Executives" and "Associated Coal Operators" representing a still smaller body of great bankers, control this vast power and either government must take over the ownership of this great power or that power can govern the country.

When, as Henry Ford has shown, the

coal mine owners are concealing their hearding coal to force 300 per cent. profit the whole nation must act in self-defense. It is more than a just protection of miners or any theory of government. It is whether a people shall freeze or factories stop at the bidding of profiteers.

It is a misconception to call such strikes as this a contest between Capital and Labor. This has been a notable episode in the age-old and world-wide contest whether autocracy or men shall control the condition of life. Formerly and in other countries Plutocracy was embodied in the monarch, supported by the nobility, an army and State church. With us Plutocracy has none of these supports, but relies upon its well-known methods of shaping public opinion and making itself the real Government by the selection and control of officials and through them shaping or construing laws for its own purposes.

Labor Bears Brunt

Opposed to Plutocracy is the interest of all the people of which Labor is only a small part, yet Labor alone is bearing the brunt of this great fight for civilization, and the rights of all men against the invisible empire of aggregated wealth, which is as ruthless, and possessed by the same spirit, as when it was visibly embodied in a monarch and sustained by nobility and Army and the terrors of the church.

In this strike of 1922, if the five Brotherhoods had joined in the strike not a wheel would have turned on a railroad between the two great oceans. Many cities would have been out of food in a few days. Business of all kinds would have been at a standstill. The railroad unions were masters, if the brotherhoods had struck, as they may choose to do in another strike. The right to strike against the private owners of railroads is sacred. Men cannot be forced to work unless we repeal the XIII Amendment and maintain a standing army of millions to enforce peonage. Laborers have a right to strike and to peacefully picket. They cannot resort to violence against person or property. Hence the strenuous efforts of union leaders to prevent all violence and of some corporation agents to provoke strikers to acts of violence.

Goal Is Public Ownership

It seems clear, therefore, that as to the ultimate effect of the strike, there can be but one result, and that is government ownership of all railroads, telegraphs, telephones, coal mines, water powers and all other public utilities. Aside from the merits of the controversy, it is impossible that the great public and the business interests of the country can abide the uncertainties which will attend a renewal of such strikes. In all other countries, most, if not all, public utilities have passed into public ownership, and the same must occur here; and this being so, the sooner it is done, the better.

England, the last country to do this, has owned the telegraphs since 1870, and took over the railroads in 1914 and has practically owned them ever since.

When this country made ready to enter the World War it was apparent to all men that the transportation system of this country under private ownership could not possibly function efficiently. It was clear that the pecuniary demands of "the Executives" of the various systems, the opportunities for profiteering and the certainty of strikes by employes in protest against mismanagement would cause an inevitable and total collapse of the whole system of private ownership.

Railroads Failed to Function

To meet this, the Government was forced to take immediate control of the railroad system of the entire country. Unfortunately, it was temporary only. The former railroad executives organized a Union-wide propaganda to decry the success of government operation. This was for the two-fold purpose of securing the return of the railroads to private ownership and immense profits which were obtained after the war based upon allegations of the inefficiency of government operation. The same reasons, however, which required government ownership to obtain the proper functioning of our transportation system during the war required its continuance for proper and efficient operation after its close

At the close of the war, every engine was put in force by the financial interests to educate the public into a wide-spread belief that government operation of the railroad system of the country had been inefficient. The truth was that without it the railroad system could not have operated at all.

Propaganda of Railroads

But such was the effect of the widespread systematic propaganda and the election to Congress of men in that interest that the railroads were returned to their former owners with immense accumulation of material as a bonus to them. Then there set in a similar propaganda as to alleged deterioration while under government control, and upon this was based the "Esch-Cummins" Act under which the former owners received a BONUS, out of the public funds, of two billion dollars. Then followed a similar propaganda and machination by which private ownership cut down the wages of those who did the work 34 per cent., but at the same time there was not a cent taken off of the enormous salaries, in some cases hundreds of thousands of dollars, and totaling many millions, which the executives apportioned to themselves.

At the same time, with unparalleled greed, these executives had increased the burden upon the public by raising freights and fares.

In short, the return to private ownership meant millions out of the public treasury paid to private ownership, millions upon millions paid by the public to them in higher freights and fares and as much more to be taken off of the earnings and the subsistence of hundreds of thousands of men and their wives and children in order that the swollen fortunes of the small body of men which really controls the entire railroad system of the country might be enormously increased, and this was to be followed by an increase in the hours of labor.

"The Executives," as they styled themselves really the "overseas" for the capitalistic owners in London and New York, evidently deemed that they were the government of this country, and that the public and the operatives of the railroads, coal mines and other public utilities existed solely for the profit of the owners of these corporations.

Operate on Cost System

The men of this country resisted similar control by the Plutocracy of Britain in 1776. There was far more reason why the operatives of coal mines and railroads of this country should now have struck, as they have done, than there was for the action of our ancestors in 1776.

In making this strike, the operatives were fighting the battles for civilization and free government. If the government can operate as it does, the post office with 600,000 employees; and if it can operate its navy and its army, without

private ownership and not for private profit it can certainly operate its public utilities in the same manner.

The great necessity as to all public utilities is that they shall be operated solely in the public interest and upon a purely "cost system" without profitjust as the post office, the army and navy and other necessary institutions are being operated.

The result of the present system of operating public utilities as a source of private profit has been to accumulate enormous sums in private hands with a corresponding destitution among the many—those who do all the work in operating them.

There are over two hundred fortunes in this country estimated at over 50 or 100 millions each—one of them is as high as eighteen hundred millions, and many annual incomes exceeding \$5,000,000 each. Not one of these could have been accumulated except out of the enormous profits derived from public utilities.

These enormous fortunes control polities, furnish the means of filling legislatures, congress and public offices of all kinds, with the agents of special privilege, and to execute the orders of predatory wealth. Like a snowball, the larger these aggregations, the more rapidly they increase.

They corrupt public life, destroy equality and debauch morality and public opinion by systematic propaganda. They take from the young men the equality of opportunity which should be the boast, and is an absolute necessity for the continuance of free institutions.

These vast accumulations are the blight of both public and private honesty. To check these vast and deadly aggregations, which are fatal to liberty and our free institutions we have resorted to a graduated income tax. But all men know that this is an abiding fraud and a delusion. It is evaded and has become merely a fruitful source of corruption.

The perpetuity of our institutions requires that these vast accumulations shall cease. The public cannot survive such enormous power placed in a few hands and obtained, as all men know they must be by illegal methods and in disregard of law. The legislation against trusts has proven useless. Like the income and inheritance taxes it is simply evaded.

Dodging the Law

There is not one of these accumulations which has been legally made. To take an example: A well known man died in New York, recently, admittedly owning over two hundred millions accumulated within the last forty years. He had done nothing for the public benefit and when he died bequeathed nothing for public purposes. His only notable transaction that recalled him to mind was that some years ago when he was sought by the law to obtain evidence of illegal practices in violation of the anti-trust law, he could not be found until after long search his hiding place was discovered and then physicians readily testified that he had cancer of the throat and could not talk. He survived this silence for many years and did not die of cancer.

YET TAKE A PENCIL AND FIGURE! If his services had been worth one hundred a week, i. e., \$5,200 a year, and he had saved half of it, it would have taken him 77,000 years to accumulate this two hundred millions out of his fellow men! Is a system that permits such accumulations in thirty or forty years one that can be allowed to continue?

There is another who is credited with the ownership of nine times as much and repeated decisions of the courts have held the methods by which heobtained this enormous aggregation of property to have been in violation of law, but the power of his wealth has been such that he has clung to it. He is too powerful to have it taken from him. Yet, on the same basis of \$5,200 a year and saving half of it, it would have taken him 700,000 years to have gathered in that much of wealth created by other men!

Profit From Others

Take another incident, among a great many. Another of these men recently stated in a newspaper interview that he is worth four hundred million, also gathered in during the last thirty or forty years. He has been branded in an opinion by the highest court in the Union as having gathered in this wealth "by illegal methods consciously and continuously pursued during a long course of years." He has made a monopoly of a large part of a great public utility and is seeking to acquire thereby and by the power of his vast accumulations a controlling interest in another great branch of industry. And there are many others.

Again TAKE YOUR PENCIL AND FIGURE! Whatever he has been worth to himself, he certainly has not been worth to the public more than \$5,200 a year. Allow him the same measure of saving one-half of that sum annually and it would take him 154,000 years to accumulate his four hundred million dollars! In return he pays in taxes to the State in which he actually lives \$\$28.00 a year, and if he pays

taxes in any other State, it is not known to the public nor the amount.

As to the income taxes and the inheritance taxes paid by these great predatory capitalists the law furnishes opportunity for fraud and protects them from detection by requiring secrecy on the part of all tax officials under the heaviest and direct penalties! All other tax lists are open to the public.

This is the result of our present system of the private ownership of public utilities. The fruits of that system are before the public. Graduated income taxes and graduated inheritance taxes have been no protection against the evils of enormous accumulation created by the private ownership of public utilities.

Lay the Axe to the Root

There can be no protection to the public or to free institutions; no guarantee of reasonable rates to the public; nor of fair and reasonable hours and wages to the laboring element save by laying the axe to the root of the tree by adoption of public ownership of all public utilities.

All the wages of the employes in all public utilities are paid by the public. There can be no reason why there should be added further payments by the public which shall give to those who received their franchises as a gift from the public the enormous profits which enable them to pluck from the public in a few years more than they could earn in thousands of thousands of years.

-(Public Ownership.)



EDITORIAL

AMENDMENTS TO THE MOTOR VEHICLE ACT.

At the conference held in Sacramente six weeks ago to consider suggestions for amending the motor vehicle act, a majority of those participating made it very clear that they were opposed to giving the cities any power to impose regulations of any kind or partake of any division of the motor vehicle fund.

It has been the practice of the superintendent of the state motor vehicle department to call such a conference bienially just before the assembling of the legislature. The idea is all right, but the plan adopted for carrying it out is all wrong.

The conference is made up of representatives of various automobile agencies and agents of the various automobile accessories, together with a few officials of the automobile associations. The League of California Municipalities and the Supervisors' Association are also invited to send representatives.

A distinctly hostile attitude against the cities was manifested at the recent conference. Suggestions that the cities should have a voice in regulating the routing of motor trucks and stages, the weight of loads or width of fires met with violent opposition. It was quite evident that those interested in motor trucks do not want to be hampered by any restrictions except such as they themselves might impose. Any regulations which the cities might demand for the safety of human life or the protection of payements might be annoying to their business. Likewise any suggestions that the cities share in a division of the motor vehicle fund, just as the countries now do, was vigorously denounced.

The League of California Municipalities was represented at the conference by Robert L. Shinn, city attorney of Sacramento; Frank C. Merritt, President of the League; Charles L. Biebel, city clerk of Daly City, and Leon E. Gray, city attorney of Oakland who, seeing the uselessness of any further participation, finally withdrew.

The automobile agents and those allied with them are apparently acting on the assumption that they have the power and mean to take advantage of it. But they may be reckoning without their host. The people should have a voice in framing motor vehicle legislation, especially the taxpayer whose money builds the highway and keeps it in repair.

A majority of the people of California now live in cities and towns and, as or government is based on the theory that the majority should rule, the views of those living in the cities and towns are surely entitled to some consideration, especially on the question of regulating urban traffic. Nor is it likely that the members of the legislature will turn a deaf ear to their demands.

There is absolutely no reason why the cities should not share in a division of the motor vehicle fund on the same basis as the counties. Nor is there any reason why the highways built by bond issues should stop at the city limits. The taxes for the bend issues are not stopped at the city limits. Is it right to tax city property to build the highways and then stop them at the city limits? Why should the people inside the cities be taxed for highways which are built only outside the cities?

The cities should assert their rights in these matters and the time has arrived when they intend to assert them and assert them in a voice that will be heard.

PORTLAND CEMENT CONCRETE ROADS

By James T. Voshell, District Engineer, and R. E. Toms, Senior Highway Engineer, Bureau of Public Roads

> Extracts from a valuable bulletin just issued by the United States Department of Agriculture.

Note: This bulletin No. 1077 illustrated and unabridged may be procured from the Superintendent of Documents, Government Printing Office, Washington, D. C., at 15 cents per copy.

INTRODUCTION.

The purpose of this bulletin is to supply reliable information on the subject of concrete pavements for the use of highway engineers and others interested in the improvement of public roads. The methods of construction described are believed to represent the best practice at this time; but, as experience and research are continually suggesting improvements, those who have charge of concrete road construction should be careful to keep themselves informed regarding results obtained by others engaged in similar work, and by laboratory experiments.

The earliest concrete pavement in the United States of which there is reliable record was constructed at Bellefontaine, Ohio, in 1893 and 1894. This pavement, which contains 4,400 square vards, was constructed in two courses and in squares similar to those employed in concrete sidewalk construction. Prior to 1909 the total area of concrete pavements was comparatively small, and in most cases these pavements were frankly regarded as experiments. During 1909 the road officials of several communities concluded that the results already obtained were sufficiently encouraging to warrant them in undertaking the construction of concrete pavements on a larger scale, and since that time a large mileage has been completed. Wavne County, Mich., was one of the first communities to adopt this form of construction, and at present probably has a greater mileage of roads paved with concrete than any other county in the United States.

The majority of the concrete pavements which have been constructed have proved entirely satisfactory where traffic conditions were not unduly severe, and their use has increased rapidly.

The principal advantages which concrete pavements possess may be briefly stated and commented upon as follows:

- 1. As far as can be judged, they are durable under ordinary suburban and rural traffic conditions.
- 2. They present a smooth, even surface, which offers very little resistance to traffic.
- 3. They are practically dustless and may be easily cleaned.
- 4. They may be maintained at comparatively small cost.
- 5. They may be made to serve as a base for some other type of surface when resurfacing becomes necessary.

The principal disadvantages are:

- 1. They are somewhat noisy under steel-tired traffic.
- 2. They are subject to cracking, and wherever a crack develops it must be given frequent attention in order to prevent deterioration of the pavement.
- 3. On account of the sharp line of separation between the pavement and the shoulders and the marked difference in hardness, an abrupt and dangerous depression is sometimes formed at the edge of the pavement which reduces the effective width of the roadway.

MATERIALS USED IN CONCRETE ROADS

Concrete consists of a mixture of water, cement, sand, and gravel or stone or other similar materials. It is customary to refer to the sand as the fine aggregate, and to the gravel or stone as the coarse aggregate. Durable, clean, well-graded aggregates are absolutely essential to the success of a concrete payement. Mixed aggregates. such as bank run gravel or crusher run stone, should not be used except under rigid laboratory control. For a successful concrete payement, each of the different aggregates should be properly graded and kept clean and separate until proportioned to place in the mixer.

.............

Portland cement of a character satisfactory for use in pavement construction is at present manufactured in nearly every section of the country. The product of all cement plants is not always entirely uniform and of equal excellence, and even if it were uniform immediately after manufacture this condition might easily be changed by age or exposure. These facts make it imperative that cement for use in concrete pavements be subjected to very rigid cests. It should meet the requirements of the specification for Portland cement tontained in Circular 33 of the United States Bureau of Standards and also issued by the American Society for Testing Materials, and accepted generally as the standard specification.

FINE AGGREGATE.

Sand is almost universally used as a fine aggregate for concrete pavements. In exceptional cases stone screenings have been used, but the use of screenings is not recommended, as the presence of dust in the screenings makes the proper mixing rather difficult and reduces the strength of the concrete, unless the time of mixing is considerably increased. Sand for use in concrete pavements should be selected with especial care. The strength of the mortar depends largely upon the quality of the sand and a strong mortar is imperative if the best results are to be obtained. Preference should be given to sand composed of a mixture of coarse and fine grains, with the coarse grains predominating, though sand consisting entirely of coarse grains is preferable to that in which the fine grains predominate.

COARSE AGGREGATE.

Coarse aggregate for concrete pavements usually consists of gravel or crushed stone, although occasionally blast-furnace slag is used. The choice between these materials depends largely upon local conditions. Satisfactory concrete pavements have been constructed with each, but so far as cracks are concerned limestone appears to have made a better record than gravel or any other variety of stone which has been used to any considerable extent.

The coarse aggregate, whether crushed stone, gravel, or slag, should possess at least as great resistance to wear as the mortar which fills the voids of the aggregate. Any sound stone or gravel, moderately hard and tough, will meet this requirement, but in general the harder and tougher the coarse aggregate, the greater will be the resistance to wear offered by the concrete. The best available stone should always be used.

PROPORTIONING.

The physical characteristics of the concrete are determined not only by the quality of the several materials which enter into it, but also, and perhaps to a greater degree, by the proportions in which the materials are mixed, especially by the amount of water used. A number of theories are offered concerning the

proportions required to produce strong and economical concrete. All are based on experimental data, but at present no particular one is generally accepted, and a great deal of investigation is being carried on in the attempt to evolve a theory which will be generally acceptable.

Lately the amount of water has been found to exert a most important influence on the strength of the concrete. Excess, it has been found, invariably brings about a decrease in strength.

The theory has recently been advanced that the strength of the concrete depends entirely on the ratio of the amount of water to the amount of cement so long as the mix is workable. According to this theory variation in the grading of the aggregates affects the strength of the concrete made with a given amount of cement merely because it affects the amount of water that is required to produce a workable consistency.

Another theory is based on the assumption that to produce concrete of a given strength a certain amount of cement is required for each unit of surface area of the aggregate, taking into account the amount of water used in mixing. The particles are assumed to be spheres, and tables have been worked out from which the surface area of a given amount of the aggregate can be determined from the sieve analysis.

It is worthy of note that each of these theories tends to the use of well-graded aggregates and rich mixes where strong concrete is desired. They have all been evolved in the attempt to design concrete of high strength, which is needed in pavement concrete to enable the pavement to resist temperature and impact stresses without excessive cracking. That concrete high in compressive strength is also highly resistent to abrasion is the conclusion drawn from tests conducted

by Prof. Duff A. Abrams, Lewis Institute, Chicago. It was observed in these tests that the resistance to abrasion fell off sharply when the compressive strength dropped below 3,000 pounds per square inch. The tests conducted by the Bureau of Public Roads do not support this conclusion, but indicate, rather, that the amount of wear of the concrete depends upon the character of the coarse aggregate. It should be noted that in the tests conducted by Professor Abrams only two kinds of coarse aggregate were used. For any given coarse aggregate, however, it is likely that increase in compressive strength will result in corresponding decrease in wear. From experience it has been found that pavement concrete should be proportioned to have a compressive strength of not less than 3,000 pounds per square inch. Pavements composed of concrete of less strength have generally proved unsatisfactory.

DESIGN OF CONCRETE ROADS.

There are two general types of concrete pavement, known, respectively, as one-course and two-course pavement. The former consists of one course of concrete, all of which is mixed in the same proportion and composed of the same kind of materials, while the latter consists of two courses, usually mixed in different proportions and containing different kinds of aggregate. The onecourse pavement is much simpler to construct than the two-course type. For the one-course construction it is customary to employ a coarse aggregate of average wearing qualities, which can readily be obtained from commercial sources.

Where a very large volume of steeltired traffic is anticipated, however, it is sometimes desirable to provide a surface of exceptionally good wearing quality to resist the abrasive action of this particular kind of traffic. Inasmuch as aggregates having high resistance in wear such as granute and trap, frequently have to be imported from long distances at great cost, the cost of a road composed entirely of this aggregate would be almost probabilitie. This has led to the development of the two-course type of construction in which local coarse aggregate of average or low wearing qualities is used in the lower course and imported aggregate with high resistance to wear is used in the ton course.

In the two-course construction it has been somewhat general practice to permit leaner proportions for the lower course than would be required for onecourse construction, but it is not believed that this practice is justifiable unless the thickness is correspondingly increased. The one-course pavement is believed to be better adapted to most ordinary conditions than any other type of concrete pavement.

WIDTH OF PAVEMENT.

The width of pavement necessary will depend upon the frequency with which vehicles are expected to pass each other, the character of the vehicles, and their speed.

It is believed that all trunk-line roads and roads of primary State systems should be constructed to accommodate two lines of traffic, whether the necessity for such a width exists at the time of construction or not. The history of highway improvement shows that there is always a tremendous increase in traffic upon the completion of the improvement.

The character of vehicles, together with the clearance necessary for safety in passing, will largely determine the width of pavements for double-track roads. Motor truck traffic has grown to such proportions that it has been necessary in many States to limit by

statute the size of load and the total width of body. The maximum width of truck body generally permitted is 8 feet. If ample clearance is provided for the passing of trucks of maximum size a desirable factor of safety will be provided for smaller trucks and passenger motor vehicles. For slow-speed traffic, such as truck traffic, a clearance of 3 to 3½ feet is necessary for safety, while for high speed traffic, such as automoibles, a clearance of at least 5 feet should be provided.

THICKNESS OF PAVEMENT.

The determination of the proper thickness of a concrete pavement for different kinds of traffic is a very complex problem in applied mechanics, and depends to a large extent on certain factors which at present are more or less indeterminate. In the first place, the loads acting on a pavement are not merely static loads, but are applied with considerable impact. This impact varies with the roughness of the pavement, the speed of the vehicle, the character of the tires, and the percentage of the total load which is carried above the springs of the vehicle. Under very unfavorable conditions it may be as high as five times the amount of the static load.

The pavement itself depends upon the subgrade for support, and this support is extremely non-uniform in character. The supporting power of a subgrade depends upon the type of soil, its capillarity, the proximity of ground water, the condition of surface drainage, the amount of sustained rainfall, and the extent of freezing and thawing.

All of these factors are extremely variable, and in combination are almost indeterminate, so that it is almost impossible to reduce the determination of payement thickness to a simple mathematical computation. The behavior of concrete payements of known

thickness under known soil conditions and known conditions of traffic is the most satisfactory index of the thickness of pavement required.

It has been more or less customary in the past to use a flat subgrade for concrete payements, and obtain the necessurv crown in the pavement by making the concrete thicker at the center than The flat subgrade was at the sides. adopted originally, no doubt, for the reason that it was simpler to construct than any other form. For a double track pavement, however, where two lines of traffic are accommodated, the use of a flat subgrade imposes the maximum wheel load on practically the thinnest part of the pavement. Under heavy traffic conditions this has often led to complete breakdowns of the edges of the payement. This action is greatly accentuated where diagonal transverse cracks occur. For a double track payement where the volume of traffic confines the limits of travel in each direction, it is essential that the edges be of the same thickness as the remainder of the payement. This can be secured by using a crowned subgrade and a uniform thickness of payement.

On a sandy or sandy-loam soil, where the traffic consists mainly of horse-drawn vehicles and passenger automobiles, with comparatively few trucks, a thickness of pavement of 6 inches will often prove satisfactory. As the volume of truck traffic and the weight per truck load increase, the pavement should be made correspondingly thicker. A greater thickness should also be used on soils of poor bearing quality which are difficult to drain than on soils of good bearing quality which are easily drained.

For the average condition of soil under traffic conditions up to and including 150 trucks per day, a thickness of 8 inches is believed desirable. In the neighborhood of large cities where a large volume of heavily loaded truck traffic is to be expected, the thickness should preferably be 9 inches, and under very unusual conditions a thickness of 10 inches may be necessary.

CROWN OF PAVEMENT.

A concrete pavement lends itself readily to the construction of low crowns. A low-crowned road is very desirable for the traffic. Water does not damage the surface of a concrete road and under present traffic conditions the wear of the surface is comparatively small, os the necessity for a high crown does not exist in this type. The amount of crown need not be any more than is necessary to shed the water from the surface, taking into consideration the small imperfections and depressions which exist in it. A crown of one-eighth to one-fourth inch per foot is sufficient.

WIDENING ON CURVES.

In rounding a curve the rear wheels of a vehicle travel on a shorter radius than the front wheels. On this account a greater width of payement is occupied by the vehicle on curves than on tan-The additional width varies with the radius of the curve, the gauge of the wheels and the length of the vehicle. To allow the same clearance between passing vehicles on curves as on tangents the width of the pavement on the curves should be increased by an amount equal to the sum of the additional widths required by the two vehicles. If two vehicles of maximum size are assumed, i. e., trucks of 204-inch wheel base with a 5-foot gauge, it will be found that for curves of 30-foot radius the amount of widening required is 12.5 feet, while for curves of 150-foot radius the additional width is 2 feet and for a radius of 500 feet, only 0.5 foot. For curves of more than 500-feet radius the additional width required is negligible.

JOINTS.

Concrete contracts or expands with changes in temperature and differences in moisture content. It also shrinks materially during the period of setting and initial drying out. In practically all early concrete payements transverse expansion joints were constructed 25 to 30 feet apart, with the idea of relieving the pavement slabs of all stresses due to expansion and contraction, thereby preventing transverse cracking due to tensile stresses or failures due to compressive stresses. In these pavements it was found, however, that a majority of the slabs cracked transversely, that it was very difficult to secure a pavement with good riding qualities in the neighborhood of the joints, and that if the expansion joints were not constructed so as to be perpendicular to the surface of the pavement the end of one slab was very likely to rise above the end of the adjacent slab. Not infrequently this relative movement amounted to 2 or 3 inches and inconvenienced traffic very materially. If the joint varied from the vertical as little as 5 degrees, this movement was likely to occur and it was

found difficult in construction work to avoid even greater variations.

These findings led to the experiment of building pavements without expansion joints, and it was found in pavements so built that the transverse cracks did not occur more frequently than in those built with expansion joints and that the shrinkage due to the setting and initial drying out of the concrete provided sufficient room for such expansion as occurred later from changes in temperature and moisture content, except in pavements laid in cold weather.

The use of longitudinal joints along the central axis of the road has generally been confined to pavements exceeding 20 feet in width. Where such joints have been used, it has been customary to construct one-half of the pavement width at one operation. After this portion of the pavement has been completed, the remaining half portion is constructed. The edges of the longitudinal joint are rounded with an edging tool, and after curing the joint is filled with bituminous material. The method of constructing a pavement in two half

(Continued on page 32)

PUBLIC OWNERSHIP REDUCES ELECTRIC RATE

CITY COUNCIL

of the

CITY OF LOS ANGELES

Mr. Wm. J. Locke,

Secy. League of California Municipalities,

Pacific Building, San Francisco, California.

San Francisco, Cam

Dear Sir:—

To show you the baneful influence of public ownership in a city, we call your attention to the fact that the City Council, a few days ago, reduced the electrical rate for cooking purposes from 5½ cents to 3 cents per K. W. H., but with a minimum bill of \$3.00 per month.

Rosportfully

FCW-LDS

F. C. WHEELER.

January 5, 1923.

THE PROBLEMS OF A CITY MANAGER

By CLYDE L. SEAVEY

Former City Manager of Sacramento and recently appointed to the Railroad Commission

(Continued from the December, 1982, Issue)

There is no one within the sound of my voice who would think of electing legislators and sending them to the state capitol to enact laws for the state, and then having them take over certain functions of the executive branch of the government, divide it up among them, and operate along the lines and under the laws that they themselves have snonsored. It would be unthinkable to do such a thing, and yet this is what we have been doing in the municipalities. practically in all the life time of the United States. But to my mind, it is simply an attempt to apply a principle of government that cannot be applied successfully, and that has made the United States a laughing stock as to the conduct of her municipal affairs.

There are problems in the matter of a city manager form of government that have not yet been worked out. It may be that there will need to be changes in the methods that now exist. But the general principle must be adhered to if we are to continue to advance in municipal government in the United States.

In Sacramento our charter specifically separates the legislative from the executive branch. The council is a legislative body, and it is prohibited by the provisions of the charter from interfering in any way, directly or indirectly, with any appointments of the city manager, or any operations of the departments under the city manager.

In the matter of civil service, it has frequently been stated in print and in public address that the city manager form of government and civil service

are absolutely antagonistic to each other. and that the city manager form of government could not exist unless civil service was eliminated. I don't believe that There are different kinds of civil service. A proper kind of civil service can operate and be of immense value under the manager form of government, as well as it can under any form of government. I believe that civil service as a method of qualifying people for positions and employment is a necessity under the city manager form of government, and a necessity for proper administration under any form of government. Neither the city manager nor any one else appointing should be in a position where he could absolutely personally control all of his appointments: not his appointees mind you, but his appointments. I believe that he should, for his own benefit, as well as for the benefit of the public and the administration, be compelled to go to a qualified list to appoint. But I do not believe that the city manager or any other executive can properly carry on the duties of his office, unless he has the right, under proper restrictions, to remove his appointees. I do not believe that any appointing power should have the right to arbitrarily remove an appointee. But I believe that he, in some public way, should be the only one to determine whether or not an appointee should remain under his administration. If the city manager, or any other appointing power, is qualified to hold his office, he must be qualified to give substantial justice to any one who is appointed by him or working under him. If he is compelled in returing any one from the service, to go to a board and submit to their decision as to whether or not the appointer shall be retired, it places him in an impossible position, to get proper results from appointees when they are not retired. And if an appointee is given certain rights, which I believe he should have, and which he has under some forms of civil service, he will be protected as far as he should be pro-

Now there are two methods of civil service. One is founded upon the belief that the person serving should be protected in his employment against his employer. The other is founded upon the belief that public service should be standardized and protected. It is not generally known, but under our state civil service, the appointing power may appoint only from a qualified list, and may remove and determine for himself whether or not the appointee shall be removed. But he must make that determination a matter of public recorda public hearing must be had if it is called for by the appointee that is to be removed. That seems to me to give any appointee sufficient protection against an improper removal. If the appointing power is willing, in a public hearing, to take up the matter of the removal of an appointee and make it a matter of record, it is a sufficient safeguard against his being improperly removed. Any public official who appoints should have the privilege and right to remove in that manner, and I do not believe you can get efficient management under any form of government without that. I have been accused on several occasions of being against civil service. I am a member of the State Civil Service Commission, and I believe in civil service. But I do not believe

civil service is made just to keep people in office. (Applause.)

The charge of autocratic power has been made against the city manager form of government. In answer to that, I wish to say that that same charge can be made just as truly against any official who is in any government service as an executive, under any form of government. I fail to see how any executive, under any manager form of municipal government of which I have knowledge, can be autocratic. He may be unpopular, he may be neglectful, he may be inefficient, but certainly under the city manager form of government, a city manager cannot be autocratic. because he has not legislative powers. A city manager operates under the ordinances and the laws governing his municipality, and simply carries out, or attempts to carry out those laws. An autocrat is one who can arbitrarily inflict legislation upon a community or upon a state or upon a nation, and enforce it without recourse. But the city manager is to a large extent an automaton in carrying out those policies, those restrictions, and those activities that are set before him. The complaint that the city manager may become autocratic falls, also it seems to me, because the city manager, more, I believe than any other kind of city executive, comes in direct contact with many citizens. The entire responsibility of the operation of the municipality governmentally, after the council has acted, is directed to the city manager. He is the target of every individual in the community. And any one who is subjected to that would not attempt to be autocratic, nor could attempt it, even if he had autocratic powers because he is under constant surveillance by the community. The charge that a city manager form of government may become autocratic, is simply one of

those charges that is raised against any new thing that may be presented for the approval of the people.

The personal equation in the city manager form of government cuts quite a figure. As I said a while ago, every individual in the city knows that the city manager is responsible if something is not done. He does not go to a commissioner and have that commissioner tell him that some other commissioner is responsible, and in that way go the round of the commissioners, and then he told finally that the commission as a body, is responsible. If something is not done, if his street is not fixed, if his street is not swept, if something is not taken care of that should be taken care of in the municipality, the offended person goes to just one man in the municipal government, and that is the city manager. He knows that the city manager is responsible; that he cannot evade his responsibility. that lies the virtue of the city manager form of government-responsibility for the proper conduct of affairs, the proper expenditure of the moneys appropriated for municipal purposes, rests continually upon him. All individuals or groups of individuals in the community who ask for something and are given it in the budget, know what should be done and where and when it should be done. and they can go to the one individual and find out why it is not done, and why the money was not expended, as it should have been expended.

That leads me, lastly, to the matter of the budget. I would not be willing to be city manager of Sacramento or any other city, if I did not have a budget provision in the charter. The city cannot properly operate and properly function without a budget.

When I came into office there had been a budget prepared, not under the provisions of the charter, and in going

back over the operations under that budget, it is almost impossible to find where they had followed the budget. except where their salaries were fixed. For the year previous to the time when we came in, there had been \$15,000. I believe it was, allocated to permanent street improvements, and we could not find that more than about a thousand dollars had been expended for permanent street improvement out of the fund in that year. And there were other things of like nature. Where you haven't a budget there is switching and manoeuvering. We prepared a budget last July, that is, July of 1921, for the city of Sacramento, under the charter. That budget is being followed during the present fiscal year which started the first of last January. I would not say that the new budget, which was prepared without very much previous experience in municipal affairs in Sacramento, was anywhere near perfect. It was not. There are lots of things about that budget that were improved upon this year. Under the charter we have a provision which gives the council the right to transfer from one department to another. No money can be transferred from the fund or the department to which it is appropriated without an ordinance passed by the city council. We have operated under our budget provision, up to this point, at least, this year, without transferring any money, from one department to another.

I thoroughly believe that a budget must be adopted in order to get proper results in any municipal government; that it must be known to the public what the budget contains. Those who prepare the budget are constantly upon their mettle, not only to properly prepare the budget, but to properly follow it. The people are entitled to know what their money is going to be expended for, except in matters of emergency that come up after the making of the budget; they are entitled to know whether or and their streets are going to be improved, and their water mains taken care of, and so on, down the line. And if money is not needed in a particular budget item, they are entitled to know that. If the money is to be used otherwise they are entitled to knowledge through legislation by the council, so that there can be no question of the proper use of the money, so there can be no question that a department is not deprived of something that it should not have been deprived of, and that the money is being expended for a purpose that is Under a proper budget system, that can be accomplished, and the funds of the people of the city better safeguarded and expended under a better balanced method, than in any other Way.

Thank you, gentlemen. (Applause.)

Secretary Mason: Mr. Seavey, there is no doubt that you have had some experience in adverse criticism and so on. What means have you taken of keeping the public informed as to the facts of your administration?

Mr. Seavey: We try to give out for public information continually those things that are being done and being accomplished, in order that the public may know. We also give out in advance, issue far in advance, anything we believe should be accomplished, in order that the public may know about it and be informed. I think it is essential that, in order to properly function, if you are going to attempt any new method, if you are going to adopt any new policy, if you are going to take over any new function, it should be given to the public in advance, in order that they may mull it over.

One other thing that I believe is helping us in Sacramento is the provision of our charter requiring that the

council meet in the evening. Prior to that, the old commission met in the day time, and there was seldom anyone there to attend the meetings, unless be had become so infuriated that he would quit his business to go over to the commission's meeting. It has proven a good thing in Sacramento. and I believe it would prove good any place, to have the meetings in the evenings. We have a room that accommodates perhaps two hundred people. it is nearly always filled with citizens who come in, and sometimes they are standing up around the room, and we have to bring in additional chairs, if something of particular interest is up for consideration. But we have found that they will come up in the evening. and you can talk back and forth, and get into some harmony of feeling on subjects over which there is a difference of opinion. It is a very good thing I think, the mingling together of the legislative body, and also the executive body, with the public in that way.

Question: How many councilmen have you?

Mr. Seavey: We have nine.

Question: What do you pay them? Mr. Seavey: We pay them \$5 a meeting.

Question: How many meetings a month?

Mr. Seavey: Not to exceed \$25.8

Mr. Seavey: Not to exceed \$25 a

Question: You spoke about your garbage. Do you mean to say that you have just bought \$12,000 worth of equipment?

Mr. Seavey: The first of this year. Question: January of this year?

Mr. Seavey: Yes.

Question: Are you making money in your garbage department?

Mr. Seavey: As I stated, in our operating cost, we have made, up

A MODEL BUILDING ORDINANCE

An Address Delivered Before The League of California Municipalities, Stanford University, California Thursday, September 21, 1922

By C. W. MITCHELL,

Of the Board of Fire Underwriters of the Pacific.

Mr. President and Ladies and Gentlemen: I hardly know how I am expected to treat this subject. I understood that Mr. Mansfield would give you his ideas, and I was to follow him. But, inasmuch as he has not said anything, it leaves me in a quandary as to just how to start in.

About 1905, the National Board of Fire Underwriters produced what they called a model Building Code. In the beginning of that edition, as a foreword, they used these words: "In the belief that safe and good construction of buildings should be universally recognized as of the utmost importance, this Building Code is based on broad principles which have been sufficiently amplified to provide for varying local conditions. Thousands of human lives and millions of dollars worth of property have been sacrificed by the criminal folly of erecting unsafe or defective buildings. So long as those in authority permit such buildings to be erected. neither life nor property can be safe. A remedy safeguarding both may be found in the Building Code. The vital importance of its principles should arouse municipal authorities everywhere to a realizing sense of their duty, and to the grave responsibility that rests upon them to enact and enforce adequate building laws for the protection of life and property."

The facts contained in that foreword are just as applicable today as they were when first presented. When the small community begins to emerge from the "village state," it is quite obvious that for the welfare of its citizens, there should be some means of controlling and regulating building construction within its limits. And, keeping pace with the growth of the municipality, it becomes necessary to extend that control and regulation to include the safeguarding of various hazards to both life and property which come as a natural result, and some of them also as an aid to that growth. And among those hazards which come as an aid to growth may be mentioned the dyeing and cleaning establishments, and the gasoline storage stations. Nevertheless, they are hazards, and must be taken care of in ordinances.

It devolves, then, upon those in authority to prove the proper means for accomplishing the desired effects, and too great care can not be taken in the framing of these ordinances. The future growth of the city should be taken into consideration, but at the same time legislation should not be so far beyond the actual existing necessity that its enactment will in reality be a check upon the city's progress.

All ordinances should be worked out with special consideration for brevity, simplicity, and the avoidance of conflict with each other. On account of varying conditions, it is recognized that it is practically impossible to draft a standard code suitable for adoption by all cities and towns. Local conditions, necessarily, must govern regulations covering sanita-

tion or other unportant subjects which may be deemed desirable. I believe it is possible, however, to have a building code which will meet the necessities of small towns and serve as a basis or foundation upon which to construct a more complete code for a larger city in keeping with its requirements for higher safeguards for its public safety. That, I believe, is what the League of California Municipalities is desirous of obtaining.

In speaking to members of an association such as this League, it is not necessary, nor would time permit one, to enter into a detailed account of the prerequisites of such a model code. However, I should like to touch in brief upon some of the items or subjects necessary to include.

To begin with, the city must be divided into two distinct divisions, by what is termed the "Fire limits." The boundary lines of the fire limits should include the business district and several blocks around it, and also any mercantile or manufacturing section. The provisions of the code will apply in general to buildings within the fire limits, for it is there that the greater value is to be found and the greater congestion as well.

But there are some of the building restrictions which may not be confined, necessarily, to the fire limits. The one which I have in mind particularly is that of roof-covering material. Building Code would provide, naturally, that w thin the fire limits roofs and roof structures should be covered with incombustible material-perhaps it would be more advisable, instead of using the word "incombustible" there, to use the words "fire resisting." In some localities, slate roofs are specified because snow loads are less apt to accumulate, but we have little necessity for such a provision in California, and while there is

no question regarding the fire resisting qualities of slate, there are other substances probably less expensive which will meet our requirements. Among these may be mentioned approved connection, I use the word "approved" reservedly, as signifying material which has been manufactured to comply with at least certain minimum requirements.

Outside the limits in which the combustible or fire-resisting roofing material is required, the material which is used almost without exception is wood in the form of shingles. A publication of the National Fire Protection Association on "Structural Defects Influencing the Spread of Fire" contains this statement:

"Any kind of a roof is safer than a wooden shingle roof. Other roofs may burn, but they will not ignite from sparks and will not furnish flying brands. The wooden shingle is a notorious confagration breeder. It furnishes both the fire brand and the tinder which it ignites."

The National Board of Fire Underwriters, in a pamphlet regarding construction and fire protection of dwelling houses, has this to say:

"The great danger of the wooden shingle roof is from chimney sparks or flying brands from burning buildings. Wooden shingle roofs in combination with chimneys, defective or otherwise, have probably been accountable for more dwelling house fires than any other defect in construction or equipment. Records show that they are responsible for over 20% of all fire losses in dwellings. The wooden shingle has also been justly called a 'conflagration breeder,' for experience has shown that many of our large conflagrations have been spread and rendered uncontrollable by the flying brand hazard of this material. It is well known that the high wind

usually associated with a conflagration will distribute blazing shingles over an area several blocks in extent. There are numerous incidents of fires being started on shingle roofs by the burning of another over half a mile away."

One of my earliest recollections of fires is away back in what my brother used to term the "United States" in Illinois, where there was a fire one night when burning shingles were carried over a half a mile, and several fires were started through those flying brands.

The conflagration in Atlanta, Georgia, about five years ago, was distinctly attributed to shingle roofs. This fire devastated a total area of about three hundred acres, involving 1,938 buildings. with an estimated property loss of about five and a half millions of dollars. more recent disaster was the Arverne conflagration in New York City last June, which burned over an area of thirteen and a half acres, with a total of 1,414 boarding houses, hotels and dwellings. The estimated loss was two million dollars. The fire chief's report was, "that one of the main contributing causes of the rapid spread and extent of this fire was the fact that flying burning embers and brands landed on wooden shingle roofs."

Another requirement of the Building Code which might be applied very well to a greater area than that included within the fire limits is that pertaining to the construction of chimneys. In fact, a separate ordinance might be made to apply to the entire municipality. But whatever ordinances are adopted, one most important point which should be borne in mind is this: Be sure that each ordinance provides the proper ways and means for its legal and strict enforcement. Too great stress cannot be laid upon this point.

Another almost equally important is

the choosing of the person whose duty it becomes to enforce the laws. In the smaller communities, this becomes quite a problem, for the one so designated must almost be a Jack-of-all-trades. Quite frequently, this duty is assigned to the chief of the fire department. It should not be taken for granted that because a man may have the qualifications necessary to enable him to act as chief of the fire department, he is versed sufficiently well in the fundamentals and intricacies of building construction to insure his ability to make proper inspection of and pass judgment upon all structures and installations.

In the smaller communities, if he is qualified for his work, the chief may act as inspector without interfering with his duties in connection with the fire department. But in the larger cities, the chief should not be burdened with other duties, and the heads of departments and inspectors, building, electrical and others, should each be a specialist in his line, and the duties of each should be confined to the particular department in which he is employed.

There are other ordinances aside from the Building Ordinance which, of course, must be considered, but I understand they are not to be taken up at this time. One of those in particular, which I think it might be well to speak of especially, is that regarding the accumulation of refuse, not only along the streets, but in the rear of buildings. I think if any of you gentlemen, even in your own home towns, would go through the basements in the city, you would be appalled at the quantity of rubbish you would see there, not only a fire menace, but also a menace to the public health.

In summing up, then, I think the proper things to keep in mind in forming a Building Code are to provide the necessary laws with the future in mind, but not to make them so stringent as to retard the progress of the city; combine brevity, simplicity, and avoidance of conflict, provide proper was and means for legal and strict enforcement and this point especially should have very careful consideration; and, lastly, choose proper persons to enforce the laws. I am going to leave with the secretary some copies of the Model Building Ordinance and some other matters for your consideration, and if there are not sufficient of them here, you may obtain them from us directly, or through the secretary. (Applause.)

PROPORTIONAL REPRESENTATION

An Address Delivered Before

The League of California Municipalities, Stanford University, California Wednesday, September 20, 1922

> By Cameron H. King, of San Francisco.

Why do we ask for proportional representation?

Our government is a democracy. The theory of the government is that the people shall rule, and when you want the people to rule, you have got to provide in your legislative bodies for as complete a representation as possible.

You say that democracy means that the majority shall rule. But there is no system except proportional representation which will actually permit the majority to rule. If you go back over the history of the elections to the California Legislature in the years 1910, 1912, 1914, 1916 and 1918, and I presume the same would hold in 1920, you will find invariably that over half of our legislators have been elected by a minority of the voters, in other words, that the people who make laws for you in Sacramento have not received the suffrage of the majority of the voters of California, but, on the contrary, they have received a minority of votes amounting from, in one case I believe 150,000 they were in minority-the other votes were cast either for their rivals or for the successful candidates in the majority. In short,

you don't get majority representation under the present system. You can't do it under the ward system of electing your councilmen. In San Francisco, we haven't the majority vote. We attempted there to get a majority vote by allowing first, second and third choices. But the system was inoperative, just as it is in the city of Alameda, and in a few other places in California-it is not used, because there a man knows if he votes for a second choice, it is going to kill his first choice, and if he votes for a third choice, it will tend to negative his choice for first and second. Under this system of proportional representation, your ballot is counted for your second only when it cannot help your first-if it will help your first choice. it is counted for your first choice.

But the graver objections to the systems which have been in operation in California and throughout the United States go beyond the mere fact of minority representation. It goes to this fundamental principle, that when you elect men to your legislative body, those men should represent the whole of the community, as far as is humanly pos-

sible to do so. If you elect by a majority vote, or try to elect them by a majority vote at large, you either have to go through two elections, and in that case a considerable minority who are defeated at the primary election are either disfranchised at the general election, or they must go and vote for some inferior choice. They get no real representation. They get no proper satisfaction for their political desires at the general election.

But suppose a block of nine men are elected to a council at a majority election, and they have a full majority back of them. When they go to sit down and consider legislative matters, when they attempt to determine the questions in legislation, that majority block may divide into five and four, and you don't get a rule of the majority, you simply get a rule of the majority representatives of the majority. For instance, 51 is a majority of 100. Twenty-six is a majority of 51. What you actually get in your city councils today is the rule of the 100 by the 26. Fifty-one elect a whole group, we will say. They are a majority. They have made their combination, they have lined up this force, and that interest and this belief, all upon a majority ticket, and they put through their majority ticket with a whoop. But when they get into the council chamber, the representatives of that majority then disagree among them-The various interests which selves have been lined up at the election, separate in the council chamber on the various questions that come up before them, and in the council chamber, the majority of the council, representing perhaps only a very small minority, perhaps 30%, perhaps, as I said, only 26%, put through their program, and we call it democracy—the accent should be on the "mock."

We believe that proportional representation will remedy that. If one-

seventh of the voters desire a man to be elected, he is elected, where there are seven to elect-there is no possibility of the other six-sevenths of the voters defeating him. He goes on as a representative of that one-seventh of the voters. If two-thirds of the voters are agreed upon two candidates, they will elect those two. If three-sevenths are determined upon three candidates, they will elect those three out of seven. with the four. If there is a majority united upon some issue, and they put up four candidates, they can vote for those four candidates in any way they want. putting any one of the four as second, any one of the four as third, and any one of the four as the fourth choice. But if those four-sevenths of the people will mark for those four candidates as their first four choices, there is no possibility of their being beaten, and, when they go to the city council, they can sit down and say "We represent the majority, we are a majority," and they can put over their measures, and there can be no criticism, because they are actually the real, true representatives of a majority of the people.

One of the things that every city needs is unity. It needs unity of the people upon its legislative body. If you allow a minority to run your city councils, you are going to have hostile criticism, you are going to have constant carping at their acts. You are going to have dissent. All the more true is it, if your election system is of such a nature that a large portion of your electorate has no representation at all on your city council. I have heard it objected, "We want a hearing in the city council." It is bad enough for the city to have the city council or the board of supervisors discussing and quarreling over the measures that come up. I say that no measure should be passed by any city legislature or a state legislature which has not been thoroughly dragged out and has got a promise of all the interests and ideals involved. You have got to get a promise, somehow or other, in order to satisfy as large a proportion of your people as possible. Any measure which is put through without the sanction of the people, any measure which is jammed through without regard to the wishes of any considerable minority, is not a proper measure.

When you elect by the so-called majority or plurality system, and one side gets its full representation in the council, the rest of the people can sit back and say, "We are Americans. We do not believe in taxation without representation, and we haven't got representation, we don't like the way you are spending our taxes." That develops time and time again, and it leads to bitter factionalism. But if in that council every considerable minority has its representative, then when they get together they thresh things out, they accommodate the various propositions that come up to them, to the actual wishes and desires of the people, as represented there, as completely represented, and the result is legislation more in harmony with the wishes and desires of the people at large.

We say also that a measure like proportional representation will have this decided advantage: it will send into your city councils men who are the real champions of the liberties and of the interests of the people. At the present time, when a man has to get a majority of the votes, he goes out with certain ideas. But he finds he hasn't a majority behind him in those ideas. He has to reach out to this side-that is it-he has to make his combinations. He becomes all things to all men, and when he is put in the council chamber, as a result, it is very hard for him to be much of anything to anyone. That is the fact. But you put a man into a council who is the

avowed representative of a certain group of interests, of a certain ideal, of a certain set of principals, and he knows he has, we will say, one-seventh of the people behind him, because he stands clear-cut for this issue, he is in that council as a father to that idea. He goes into the council entirely free, and he cannot be terrorized by some little clique over there or minority, who may say, "If you vote against us, we are going to knife you at the next election." He knows he was put there because he represents certain principles, and he will fight for those principles, and to those who do not like it, he will say, "Get your representative. Get the fellow you voted for to represent your principles. and support them. I was elected on these principles, and I am here to champion these principles. My political future is at stake, and I can only encompass it by championing the principles I was elected to champion." He can't be bulldozed and terrorized, as a boss man, or, under your majority system, where some anomalous group which held the balance of power claims it put him into office and can pull him out of office, regardless of the wishes of the great mass of his supporters.

There is much more I could say, but you have a full program, and the chairman has just indicated that my time has expired. There are a number of pamphlets on proportional representation here, and we would be very glad to have you take them and make a study of the subject, and we are convinced that, when you do study it, you will realize that proportional representation is the only method by which you can have complete representation of every considerable minority of the people and at the same time be invariably sure that, in the city council it is the representatives of the majority that are going to rule. It can't work otherwise.

I thank you. (Applause.)

Legal Points That Engineers and Councilmen Should Know

An Address Delivered Before
The League of California Municipalities, Stanford University, California
Thursday, September 21, 1922
BY CHARLES N. KIRKBRIDE
City Attorney of San Mateo

Mr. Chairman and Ladies and Gentlemen: Mr. Rowell set forth a thought that was a particular theme that I desired to speak about this morning, in his intimation that you, as public officials, in dealing with the reporters and the papers, should treat them alike. The particular thought that I had in mind was that of fair play on the part of the public official.

I wish to stress somewhat the importance of your job. When you took office, you appeared before some official and took off your hat and held up your right hand and took an oath. That oath was phrased somewhat like this: "I solemnly swear that I will support the Constitution of the United States and the constitution of the State of California, and that I will faithfully perform the duties of the office, according to the best of my ability."

I was particularly struck a few days ago by reading a communication from United States Senator Frelinghuysen, of New Jersey. This communication was in a home town paper in New Jersev that goes into every family there. Senator is running for re-election, and some of his constituents have asked him some questions about his position on particular issues. And in this signed communication, to his home town constituents, he set forth verbatim the oath which a United States Senator has to take on assuming his office. That oath is somewhat more extensive than the one which we take in California. It sets forth, among other things,

that the one taking it must defend his country against its enemies, not only those abroad but those within. And the lesson that I submit to you was in accordance with the lesson that he submitted to his people that, if elected, he proposed, to the best of his ability, to abide by that oath.

Now we, when we take an oath to support the constitution of our country and of our states, assume an obligation, and we then become a part of the government. We become a person clothed with authority, and I desire to impress upon you some of the incidents of that authority.

That authority is not limited to some of the local problems that may confront you. I know how it is ordinarily, I have been hearing it for years-every time a person comes up for election to the city council, the question is, whether he is going to fire the superintendent of streets or fire the chief of police. I have no doubt but what they are both unworthy-they always have been-I have been hearing about it every two years, I know. They may be particular friends of mine, but they must be unworthy because we hear about it so much. But I say this, that when you have taken your oath of office, the time for campaign politics ceased. It is no longer a problem of whether the chief of police is going to be fired, or the superintendent of streets. You become clothed with authority. You have certain obligations to perform, and those obligations are not limited to your duty to the quota

of thinteen that we had pointed out to us yesterday on the blackboard, out of of a vote of 101 your duty is not a dury to the 13, to the particular quota that elected you it is a duty to the whole people, not only of your own community, not only of your own county, but also of your state and of your nation.

We have seen in the past few years. and are seeing new evidences, that our civilization is passing through a serious ordeal. When boys, as they did last week in San Francisco, form themselves into gangs and go out and hold up people with pistols and rob them, not in order to get money, not in order to kill or do anything of that kind, but simply for the purpose of getting a kick out of it, I say that there is something questionable about the permanency of our institutions, and that we must begin to think about it. When, as they did in San Francisco a few days ago, automobile parties come down the street and fire on and shoot down the people on the sidewalk who are not interfering with them, and then drive on and come back and fire again at innocent bystanders, we are faced with a problem of "What are we going to do about it. and is our civilization going to stand?"

A few years ago, at the close of the war, they said there would not be any more war. But there has not been a day since but what there has been war on the face of the earth, and at the present time the indications are that the barbarians are coming down from the North and coming in from the East, and the question is whether European civilization is going to stand. Are we going to be in it again? You know, every one of you, that if Russia and Turkey unite in an onslaught on European civilization, the United States will be in it. We will have to be in it.

Now, what are we going to do abou

it as public officials? The point that I make is that every public official owes a duty to his government, to help preserve the institutions such as we have.

I was particularly interested in the statistics presented at the recent convention of the American Bar Association in San Francisco, statistics given to us as the result of an investigation in the postal department. And what were they? That 2,500 publications in the United States are devoted to the overthrow of government and the spread of anarchistic propaganda, and that the number of orators, the number of people in the United States to whom those papers appeal, is estimated at two million. In other words, we have within our own confines a population of the size of two-thirds of the population of the United States at the time of the Revolutionary War, now devoted to the overthrow of this government and any other government that claims to be a government. They don't want government.

With that element of revolution in our own community, we must safeguard ourselves. We must do something to preserve life, if nothing else; we must do something to preserve a modicum of liberty and the right to get a portion of the enjoyment out of life and the preservation of our property.

What are we going to do about it? What is the lesson to be learned from this? The lesson, as I see it, is that we must, in our treatment of the people, guard ourselves cautiously, in order that we may not be said not to be performing or fulfilling our full duty. And if that man that you may not like is nevertheless efficient. is nevertheless properly performing his duty, keep him in office, although you want to get him out. You owe a duty to the whole people, not to the particular quota or

clique that elected you, but a duty to the people as a whole.

Now, a few instances: One of the big problems that you have before you is that of street work. Are you going to force street work upon property that can not fairly and reasonably stand the burden of it? If you do, isn't that an autocratic attitude, and is that the proper attitude on the part of the public official, to say to this person that may have a lot worth \$250. "You must lose that lot and give it to the public for nothing, by virtue of a street assessment that you can't pay, that the lot cannot legitimately stand." I have seen instance after instance of virtual confiscation of land, in order to pay public assessments. I say that that is not the way to preserve civilization. Confiscation is not the way to have people respect ourselves and respect our form of government.

Then we will say we will go ahead with the street assessment proceedings. There comes a time when you give notice to Mr. Property Owner that he must come in before you and have a hearing on this matter. You have prejudged the case, before that property owner comes before you, it may be a controversy over his assessment, as to whether it is properly made, it may be a controversy over the question of whether the work has been done—I say, if you

prejudge the case before the hearing, you are not performing your duty in such a way as to get respect given your office.

Many of you may have heard the Virginia judge who was on the Orpheum circuit for a while, the inimitable Kelly. He told a story of the darky woman who had come in before him. She said. "Jedge, I want a 'junction against my husband." The judge said "What has he been doing?" and she said "I dunno. he 'most crazy-he come home last night, and I think he must be under the influence of intoxicating liquor, and he says, 'Come to me, my sweet love'. and when I come to him, he busts me in the face with his fist." Now, that's the way with a good many towns. They say to the property owner, "Come to me, sweet property owner, and we will give you justice." And when the property owner comes in and presents his case, bust him in the face with an adverse decision that was pre-arranged. That is not conducive to civilization. That is not performing our duty in the way it should be performed. And I say that that should be avoided.

Your city attorney will tell you that you must give hearings, that our laws require it; that the law in this state says that before we can take property for public purposes, there must be due process. That due process means that

N. CLARK & SONS

INCORPORATED 1889

Manufacturers of

ARCHITECTURAL TERRA COTTA, PRESSED BRICK
VITRIFIED AND TERRA COTTA PIPE
HOLLOW TILE FIRE PROOFING

FIRE BRICK TILE AND KINDRED CLAY PRODUCTS

Office: 112-116 Natoma St. WEST ALAMEDA SAN FRANCISCO

the property owner shall have a hearing, that he shall have a chance to go down into some place and take his case, and show that they are not treating him take, and have a fair and an impartial decision upon the facts as presented.

City councils have any number of times when they have to take that attitude. When the question comes up of whether you will refuse or grant a license on something, while you are given the privilege of refusing. A question comes up whether or not you shall grant a building permit; a question comes up in innumerable ways, in matters of public importance, as to whether you shall do this or do that, and in which you must preserve an impartial attitude. And vet we go along and decide what we are going to do, tell the people to come in and have a hearing, and we have already decided the case against them, and they don't really have a hearing. In other words, we deprive those people of their rights. I say that government should not deprive anybody of his rights. Everybody should have a fair, a square. and an impartial hearing.

The law tells you that you can't let a contract for so many dollars unless you let it by competition. And yet we have case after case in which the people try to piece-meal things out so as to evade the purpose of that law. That is a rightcous law. It is in order to give fair play, in order that people and the contractors and everyone may know that they will have an even break on getting public work. And yet time after time they will say, "We will split it up and make it in \$500 or \$100 chips, and give it to so and so and so and so and so, and issue different warrants to evade the law. My plea to you is not to evade the law, but to hold ourselves to the high calling that is upon us, that we must strictly obey the provisions of the statutes, and, if anything, err on the



PARAGON Fire Hose

"Anything less than the best in fire hose is a losing investment."

United States Rubber Co.

EUREKA FIRE HOSE DEPARTMENT 1104 I. N. VAN NUYS BLDG. LOS ANGELES, CAL.

812 SEABOARD BLDG.



FAIRCHILD-GILMORE WILTON CO.

Paving Contractors

Rooms 500-504

Los Angeles Railway Building

Los Angeles

ENGINEERING SERVICE CO.

"Service That Insures Permanence"

EXPERIENCED ENGINEERS

California Improvement Proceedings

CONSULTATION DISTON INSPECTION

1316 Washington Bldg.

Los Angeles, Cal.

side of strictness rather than on the other side.

Now another thing: You men know, everyone knows, that a public official cannot be interested in a private contract. And yet here some contractor comes along, and he has a secret inderstanding with some member of the council or some public official, through his family connections or something of that kind, and he wants a contract. And the question is, where he is going to get it. That isn't right. The man who is in public office should say. "No. I will err on the side of strictness. and my friends, instead of getting a superior chance for public preferment, will get an inferior chance." In other words, give everybody a fair break, and be sure that they get a square deal.

That is my plea this morning. This principle of statutory law that a public duty is presumed to be properly done by a public official, implies an obligation on the part of the public official that he shall see to it that he does properly perform his duties. And that means that he must not give any secret preference to any particular individual or any particular clique in the community. but that he shall hold himself strictly to the point of a trustee-a trustee for the whole community, working for everybody. That attitude, I sav, will tend to the preservation of civilization in this country and throughout the world.

I thank you. (Applause.)

SAN FRANCISCO TO BUILD TRANS-MISSION LINE.

Construction of a 700-mile transmission line, to bring to San Francisco the hydroelectric power generated at the Moccasin Creek power plant of the Hetch Hetchy project, will begin within a few months, following the receipt by the Board of Public Works of bids on wire for the line. The wire alone, it is estimated by City Engineer M. M. O'Shaughnessy, will cost approximately \$1,000.000.

CLYDE C. KENNEDY

MEMBER AMERICAN SOCIETY
OF CIVIL ENGINEERS

SPECIALIST IN MUNICIPAL IMPROVEMENTS CALL BUILDING SAN FRANCISCO DOUGLAS 8670

EDWARD GLASS

UNDERWOOD BLDG. SAN FRANCISCO

Quality of Circulation is what Counts In Advertising

If you are interested in reaching the largest possible number of interested buyers for the lowest possible cost, advertise in

PACIFIC MUNICIPALITIES

Rates on Application

We give our advertisers service

Dust As a High Explosive

To the housewife dust is nothing more than are everythe mission. It is something that drifts into the house through open doors and wandows, oncors the formation and causes a lot of drindgery in housekeeping. To the materist dust is a be-product of had roads. It is to be expected where roads are unpaced. However, very few possile recognize dust as a high explosive something that can be responsible for serious explosions, causing great lessed property and like.

A number of serious accidents in industrial operations have been traced directly to the explosive properties of dust. Perhaps the most between the example was the complete wrecking of the Northwestern grain elevator in Chicago in the summer of 1921. Dust that had collected along the beams in the elevator exploded, completely demolishing the structure, which was the largest of its kind in the world.

The theory of dust explosions is easily understood. An explosion is nothing more than a rapid burning. A stick of wood burns alowly. Split it into kindling and it burns more easily. Whittle it to shavings and it burns even more rapidly. Finely divide the shavings into dust, dry them and allow them to become thoroughly saturated with the exygen of the air, which is the basis of fire, and you have material for an explosion.

The same thing is true of coal dust. In many industries, notably the making of exement, the coal is dried and finely pulverized, Naturally the finest of these particles secape and settle on beams and floors in the pulverizing mill. It is necessary for cement mills to keep a force of men constantly at work removing coal dust, which is innocent enough in appearance, but in reality is a deadly exclusive.

An amendment to the Buffalo charter permitting the city to acquire a municipal ice plant, coal yard or transportation system, is being considered by the council.

It further provides that in an emergency the city may take over any factory, storage warehouse or other plant through which the necessities of life or public service are created, rendered or distributed.

The following cities own and operate municipal telephone systems: Brookings, So. Dak.; Barnesville, Minn., and Galtry, Okla.

In Chicago, San Francisco and many other cities we pay 8 cents a k. w. h. for electricity. In Toronto, London and several other cities in Ontario under public ownership the people get the same service for 2 1-5 cents a k. w. h.

I Bu

LAFRANCE NOZZLE Built Like a Fire Engine

PRODUCED after many painstaking experiments, the LaFrance Nozzle is well qualified to bear the name of the world's largest manufacturer of fire apparatus.

The water way is in perfect alignment, the bore of the valve mechanism is straight.

The nozzle automatically packs itself. No outside adjustments. Handle of Manganese bronze, designed to withstand the severest usage. Shut off valve easily operated.

American Jafrance Fire Engine Company, Inc.

151 New Montgomery St. San Francisco, Calif. 1302 Washington Bldg. Los Angeles, Calif.

As Assessing Time Draws Near

Then you naturally think of

Assessment Lists Assessment Rolls Tax Bills

and we want you to also remember that A. Carlisle & Co. are doing the work for the majority of cities and towns for the coming year.



46 years of continuous service to municipalities is our guarantee.

That's good insurance.

A. CARLISLE & CO.

SECOND REQUEST

You Are Urgently Requested to Give This Matter Your Attention.

MR. CITY OFFICIAL:

WHAT SUBJECT WOULD YOU PREFER TO HAVE DISCUSSED AT THE NEXT CONVENTION?

Kindly mark the figures 1, 2 and 3, opposite your first, second and third choices, and return to League of California Municipalities, Pacific Bldg, San Francisco.

PAVEMENTS - grading, materials, cleaning, repairing,

SEWER SYSTEMS -materials, cleaning, disposal methods. GARBAGE-segregation, collection, disposal, ZONING—classifying districts, changing, PURCHASING AGENTS powers and duties. PUBLIC OFFICIALS AND THE PRESS -commendation, condemnation. BUSINESS LICENSES -desirability of, limitations. BUDGET SYSTEMS-provisions of. BUILDING CODES -fire limits, removing dilapidated buildings. BILLBOARD REGULATION-prohibition, regulation. STREET LIGHTING-most efficient methods, standards. PARKS AND PLAYGROUNDS—apparatus, fencing, swimming pools, STREET ORNAMENTATION -- parking spaces, trees, street signs. FIRE PROTECTION -alarm systems, apparatus, SOCIAL SERVICE -- health centers, relief to needy, etc. MUNICIPAL MARKETS-limitations and management. TRAFFIC PROBLEMS -street ears, busses, automobiles. PUBLIC SPIRIT -how to arouse, civic organizations. PENSION SYSTEMS - scientific tables, rights of pensioners, LIABILITY INSURANCE state or municipal. (Add any other subjects)

Burning Coal in a Blow Torch

When ordinary bituminous coal is dried and very finely ground it can be used as finel in a blow torch, much the same as the gasoline forch that is commonly used by plumbers and tinners—only the coal blow torch is operated on a much larger scale.

on a men rarger scare. If a teaspoonful of gasoline is ignited it burns with a yellowish, low-temperatured flame; if air is introduced and the gasoline is forced through a tiny nozzle, the temperature is much higher; heat the gasoline to a vapor and thoroughly mix it with the oxygen of the

What is true of gasoline is true of coal. Modern industry has taken advantage of this feature, and is obtaining increased heat and power by grinding coal and using it along the lines of a blow torch. In the cement industry when the coal arrives from the mines it is ground to a fine powder in huge pulverizing mills, after it has passed through driers and had the excess moisture removed. This coal dust is then fed into pipes and forced along by air pressure into the kilns. The immense amount of oxygen in the compressed air causes the coal dust to burn instantaneously and with an intense heat. Inasmuch as a temperature of between 2,500 and 3,000 degrees Fahrenheit is required in the kilns to fuse the powdered raw material to a clinker, this method is a most satisfactory one.

Over seven million tons of coal were consumed at the cement mills of this country last year. For every barrel of cement that came out of the mills an average of 200 pounds of coal were burned. At some of the larger mills a ton of coal a minute is consumed, so that the ten tons of coal needed by the average family every winter for heating the home would be consumed in about ten minutes at a

cement mill.

The steel industry is also coming to be a large user of powdered coal, but at present the cement industry is by far the greatest coal grinder in the country.

Taking the Accidents Out of a Hazardous Occupation
Ever since the invention of gunpowder
people have had a great deal of respect for the

power of the material. The mere mention of high explosives suggests the possibility of accident, for every ounce of it carries death if it goes off in the wrong place at the wrong time.

Industries that use large amounts of dynamite and other high explosives have long been aware of the necessity of educating the workmen to extreme caution in handling the material. A large part of the safety work carried on in manufacturing plants and quarries has to do with care on the part of the individual workman. As a result, accidents are becoming fewer in those industries where a comprehensive campaign of safety education is being carried on.

In the cement industry over 14,000,000 pounds of dynamite and powder were exploded last year in the various quarries without a single severe injury to any of the workmen. This record is largely due to the fact that the cement industry has been busy educating the men as to how to avoid accidents.

It is a common occurrence for workmen in a cement quarry to explode a charge of 10,000 pounds of dynamite at a single shot. Charges of thirty to forty thousand pounds are trequently exploded, while several quarries have exploded single charges of eighty thousand pounds.

The explosion of enormous quantities of dynamite in the quarries is necessary because of the huge amount of rock needed daily at the grinding mills. Some of the big rock crushers weigh as much as 425,000 pounds and are capable of crushing hundreds of tone of rock aday. It is estimated that a pound of dynamite displaces on an average of five tons of rock in the quarry.

In addition to safety educational work all modern industrial plants and mills use various types of safety devices. An up-to-date plant will have belts, gears and dangerous machineenclosed with guards. Special devices protect against accidents from electricity, while extra precautions are taken at all places where human error is likely to result in a serious accident.



List of Cities Having Paid Their Dues During the Last Six Months

111		121 63 15	2.24
Albany, Ore	\$15.00	El Cerrito	\$20.00
Alturas	10.00	Emeryville	20.00
Angels	30,00	Exeter	20.00
Arcadia	20.00	Elsinore	10.00
Arcata	20,00	Etna	10.00
Antioch	20.00	Fullerton	30.00
Arroyo Grande	10.00	Fairfield	20.00
Bishop	20.00	Fillmore	20.00
Burlingame	30.00	Ferndale	10.00
Brawley	30,00	Fowler	20.00
Colfax	10,00	Fresno	50.00
Culver City	10.00	Fort Bragg	20.00
Chino	20.00	Fortuna	10.00
Colusa	20.00	Fort Jones	10.00
Carmel-by-the-Sea	20.00	Glendora	20.00
Claremont	20.00	Hyde Park	10.00
Clovis	20.00	Imperial	20.00
Calexico	30.00	Jackson	20.00
Calipatria	10.00	King City	20.00
Delano	10.00	Lakeport	10.00
Dixon	10.00	Long Beach	50.00
Dinuba	30.00		
		La Grande, Ore	10.00
Dunsmuir	20.00	La Verne	20.00
Davis	10.00	Los Banos	20.00
El Cajon	. 10.00	Martinez	30.00

Sacramento
Capital National Bank Bldg.

San Jose Bank of Italy Bldg. Los Angeles Fay Building

WILLIAM DOLGE & CO.

Certified Public Accountants
Municipal Accounting

Audits, Examinations and Special Examinations. Accounting Procedures for Municipal Utilities. Budget Systems Installed

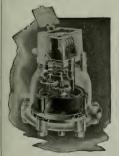
Telephone Sutter 697

369 Pine Street

San Francisco, Cal.

Needles	\$20.00	Sonora	\$20.00
Newport Beach	10.00	South San Francisco	30.00
Newman	20.00	Stockton	50.00
Oroville	30,00	Sutter Creek	10.00
Potter Valley	10.00	Sunnyvale	20.00
Patterson	10.00	St. Helena	20.00
Petaluma	30.00	South Pasadena	30.00
Piedmont	30.00	Sausalito	20.00
Plymouth	10.00		20.00
Red Bluff	30.00	San Bruno	
Rialto	10.00	San Juan	10.00
Ross	10.00	Santa Maria	30.00
Riverside	40.00	Sisson	10.00
Rio Vista	20.00	Suisun	10.00
San Marino	10.00	Taft	30.00
Santa Clara	30.00	Tulare	30.00
San Buenaventura	30.00	Traey	20.00
San Leandro	30.00	Turlock	30.00
Santa Barbara	40.00	Ukiah	20.00
Santa Paula	30.00	Upland	20.00
Sebastopol	20.00	Vacaville	20.00
Sonoma	10.00	Vallejo	40.00
Sierra Madre	20.00	Visalia	30.00
Santa Rosa	30.00	Watts	30.00
Santa Monica	40.00	Watsonville	30.00
San Luis Obispo	30.00	Willits	20.00
San Gabriel	20.00	Yreka	20.00
San Anselmo	20.00	Yuba City	20.00

EMPIRE WATER METERS



OSCILLATING PISTON TYPE 5.8" to 6"

Tested and proved by over thirty years of unsurpassed service.

Never equaled for sustained accuracy and low cost of maintenance.

The best water measuring device procurable anywhere at any price.

 $Send \ for \ illustrated \ descriptive \ catalogue.$

NATIONAL METER COMPANY

LOS ANGELES
251 CENTRAL AVENUE

SAN FRANCISCO 141 New Montgomery St



Three Things That Make a Road

ENGINEERING MATERIALS EQUIPMENT

It is a striking fact hat the A. F. Gilmore Company may assist you in respect to ALL THREE.

ENGINEERIN

Data on road building collected in the course of supplying Gilmore Road Oils to hundreds of communities are available to you always, without any obligation.

MATERIALS:

This touches the main function of the A. F. Gilmore Company to supply you with Road Oils and Asphalt Binders. Cilmore Road Oils excel in adhesiveness and durability, because of natural superiority fully developed by advanced methods of treatment.

EQUIPMENT

To make the most of excellent material we have had constructed a special fleet of trucks to apply Gilmore Road Oils. Our oils are delivered in these trucks to any road builder within reach of Los Angeles.

"At your service for better roads"

A. F. GILMORE COMPANY

Oil Producers, Refiners, Marketers

700 VAN NUYS BLDG...

LOS ANGELES

Continued from Page 1.1

sections is particularly advantageous on some heavily traveled roads where it is not possible to divert the traffic. The construction of a pavement of this type can be carried on without diverting the traffic, although the operations of the contractor are hampered somewhat, resulting in slightly increased costs.

Longitudinal cracks are more objectionable than transverse cracks because they have a tendency to gradually increase in width. When they occur along the line of wheel traffic the edges of the cracks deteriorate rapidly unless carefully maintained. An important advantage of a longitudinal joint along the central axis of the road is that it serves to define sharply the limits of travel in each direction, thus providing a desirable factor of safety for road travel.

STEEL REINFORCEMENT.

Steel reinforcement in the past has been used in concrete pavements, primarily to prevent excessive cracking. For this purpose it has been customary to use wire mesh or expanded metal weighing from 25 to 40 pounds per hundred square feet. Equally satisfactory results, however, can be obtained by the use of ½-inch deformed bars spaced 24 inches center to center in both directions. This reinforcing

should be placed not less than 2 inches from the finished surface of the pavement, and should extend to within 2 inches of all joints, but not across them. Adjacent lengths of wire mesh or expanded metal should be lapped from 4 to 8 inches. For ease in handling, the wire mesh or expanded metal should be obtained in flat sheets. The use of this kind of reinforcement will add from 30 to 60 cents per square vard to the cost of the pavement and this additional cost is no doubt responsible for the fact that concrete pavements have not generally been reinforced in the past. Reinforcement of this type, moreover, does not entirely prevent cracks, but distributes them and keeps them small.

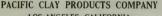
SHOULDERS AND DITCHES.

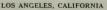
The width and kind of shoulders necessary for concrete pavements will depend upon the width of pavement and the volume of traffic. On double track pavements the shoulders should be of sufficient width to allow for irregular and unexpected actions by inexperienced drivers or frightened animals, and, where the volume of traffic is large, to permit automobiles to turn out onto the shoulders for minor adjustments or tire repairs without blocking the traveled way. The width of each shoulder, then, should be not less than 5 feet; a width of 6 or 7 feet in preferable.

WE SOLICIT MUNICIPAL ORDERS FOR



VITRIFIED CLAY SEWER PIPE AND FERGUSON SEGMENT SEWER BLOCKS







FIRE HOSE The GUTTA PERCHA & RUBBER MFG. CO.

34 FREMONT ST., SAN FRANCISCO, CAL.

to August 31st of this year, something over \$8,100, and that is being applied towards the purchase of the equip-

Question: Do you mean to say that you got \$8,100 out of the cost of taking care of the garbage?

Mr. Senvey: 1 do.

Question: How did you do it?

Mr. Seavey: We ran it economically and maintained the same charge to the householders that they had had to pay before, or that was collected by the private garbage men.

Question: What is that charge

Mr. Seavey: It is 50 cents a month for one collection a week, and 75 cents a month for two collections a week, for individual residences.

Question: What do you do with your garbage?

Mr. Seavey: We have been doing a number of things with our garbage.

We incongrated some of it in the first place we have stopped that now. We are at the present time feeding hogs, and covering what is left after the hogs have eaten the garbage.

Question: You don't thean to say that you are running a hog farm?

Mr. Seavey: We have entered into a contract with some hog men to get a percentage of the increase in weight of the hogs that are fed. We have estimated, from what has already taken place along that line, that we will make about a thousand dollars a month on the hogs.

Question: What does the city of Sacramento pay per month for this

Mr. Seavey: About \$10,000.

Question: That you collect from the people for collecting their garbage, do

Mr. Seavey: Yes. I think it will average about \$10,500 a month.

PURE IRON AND LONG-LIVED GALVANIZING

New Pork Zoological Park

NEW YORK ZOOLOGICAL SOCIETY.

185th St. & Stathers Bealmard

New York, Aug. 5, 1919 ...

The wire fabrics shown in the photographs and I, personally, featened to the cares of a ng located in the Fark on July 14, 1915, and they even exposed constantly to all the steephery: lone outside of the ballding shown, up to 4, 1919.

The letter herewith reproduced is one more proof of a fact often stated on scientific and practical grounds:

The purer the base metal the longer-lived its galvanizing.

Armco (American Ingot) Iron is the purest iron commercially

These facts have an important bearing on the selection of metal culverts, roofs, gates and

CALIFORNIA CORRUGATED CULVERT COMPANY

Los Angeles

W. Berkeley

Secretary Mason: Mr. Seavey, does your city carry its own compensation insurance, or do you insure with the

Mr. Seavey: We carry our own. Secretary Mason: Do you save money

Mr. Seavey: We have so far.

Secretary Mason: What is your rate of taxation per hundred?

Mr. Seavey: 1.78.

Question: On what basis do you think you are assessed?

Mr. Seavey: About on a 50 per cent

Secretary Mason: How much of that is for municipal bond payments?

Mr. Seavey: About 60 cents.
Secretary Mason: Do you advocate

the provision of your charter paying your councilmen \$25 per month?

Mr. Seavey: I really didn't advocate it.

Secretary Mason: I just wanted to

get you on record about it. What do you think about it?

Mr. Seavey: I am rather inclined to think it is all right.

Secretary Mason: How do you expect to get the best quality of brains at that figure?

Mr. Seavey: They don't run the ivery—they hire the brains to run the city. Sceretary Mason: It seems to me as if you have got out of balance up there at Sacramento—you are paying for all the brains in one department.

Mr. Seavey: Oh, no—the heads of the departments are getting good salaries, too

Secretary Mason: You spoke about the council being the legislative body.

Mr. Seavey: Yes.

Secretary Mason: I can't figure how any man for \$25 a month can give up his time, and give enough of his effort to be a reasonably good legislator of a city of that size, for any such amount.

PIPE TANKS CULVERTS

For PERMANENCY use STEEL For QUALITY buy "WESTERN"

We furnish Pipe from 1-16" to 1" thick in any diameter.

WESTERN makes STEEL TANKS for all purposes.

Designed, Fabricated, Erected anywhere on the Pacific Coast.

WESTERN CORRUGATED CULVERTS will give service heretofore unknown, as WESTERN CULVERT METAL is of unequaled rust-resisting, non-corrosive Quality. You will find nothing but "WESTERN" Culverts under the State Highways.

Let Us Figure Your Specifications

Western Pipe & Steel Co. of Cal.

444 Market Street SAN FRANCISCO 1758 N. Broadway

TAFT

BAKERSFIELD

FRESNO

Mr. Seavey. The whole theory of it was that they wanted to get men that were interested in the manicipality who would be willing to give their time practically in the service of the city.

Question: Who tells those gentlemen how to vote up there?

Mr. Seavey: They tell themselves. Of course, there isn't any question but what it is worth more.

Question: I don't see how they can get the right kind of men in the city of Sacramento in that way.

Mr. Seavey: They meet in the evening, and they don't take the time away from their business.

Question: Down in Long Beach we meet Monday evening, and sometimes one or two other nights in the week for instance, we had meetings last week Monday night and on Tuesday, and then we had a meeting on Thursday night, and then I happen to know of a meeting that I attended on Friday alternoon, an important meeting, and a meeting on Saturday morning. All of that takes time. I want to ask you a question as to your insurance rate. By giving better fire protection, were you able to reduce the rate somewhat?

Mr. Seavey: We have been promised a reduction.

Question: But you haven't got it

Mr. Seavey: No, sir, we have not.

Question: What is your basic rate?

Mr. Seavey: I could not give you

President Bartlett: If there is nothing further to be asked of Mr. Seavey, I will now present to you Mr. William J. Locke, Executive Secretary of the League, who will discuss the subject of "Municipal Charters in the Making," Mr. Locke. (Applause.)

(NOTE: Mr. Locke's Address was published in the November, 1932 Issue)



TRIDENT METERS

Split Case Meters for Warm Climates C. I. Breakable Frost Bottoms for Cold Climates Hot Water and Oil Meters. Crest Meters for Large Flows Compound Meters for all streams, Large and Small

TRIDENT DISC

Sold 158,000 in 1921

A record unsurpassed in the history of the Meter Business

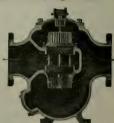
MANUFACTURED BY

NEPTUNE METER CO.

NEW YORK

PORTLAND, SEATTLE, SPOKANE, SAN DIEGO

LOS ANGELES OFFICE AND WAREHOUSE



TRIDENT CREST

BAN FRANCISCO

Pacific Municipalities COUNTIES

A Monthly Review of Municipal Problems and Civic Improvements

OFFICIAL ORGAN OF THE LEAGUE OF CALIFORNIA MUNICIPALITIES



HIGH SCHOOL, CORONADO

LEADING ARTICLES IN THIS ISSUE

CORONADO—CONVENTION CITY	1923			

MUNICIPAL	DEVELOPMENT	

By Dr. B. M. Rastall					45
THE PUBLIC OFFICIAL AN	D THE	PRESS			

By Chester H. Rowell.





A TYPICAL FRESNO COUNTY SCENE

Clovis Avenue, about three miles north of Clovis. Pavement constructed in 1920, consists of five-inch asphaltic concrete laid in two courses. Is ingood condition, with no maintenance. Photographed November, 1921.

Fresno's Shock-Absorbing Highways

The citizens of Fresno County have wisely invested in over 135 miles of shock-absorbing asphaltic concrete base and surface pavements.

"Asphalt for Durability" In selecting asphaltic concrete, Fresno County has given consideration to an important fact—that its resiliency will afford comfort to motorists, and protection to the subgrade from the shocks of traffic for years to come.

Resilient pavements "ride" more comfortably the bounce, shock and jar of rebound are largely absorbed in the pavement—when it is of asphaltic concrete.

Asphaltic concrete pavements that have stood the shocks of fast and heavy traffic for ten to twenty-seven years, with practically no expense for upkeep, prove the economy and durability of this type of pavement.



Pacific Municipalities

AND COUNTIES

OFFICIAL ORGAN OF THE LEAGUE OF CALIFORNIA MUNICIPALITIES

Entered as second-class matter March 22, 1913, at the Post Office at San Francisco, California, under the act of March 3, 1879.

VOL. AAAVII IV	VENTI-SIXIH TEAR	190, 2
	H. A. MASON and WM. J	
Address all Communications to "	SING RATES ON APPLICATION PACIFIC MUNICIPALITIES," Pacific Buan Francisco, California	uilding
F	EBRUARY, 1923	
	the League of California Municipalities is entitled cials without extra charge. If not received kindly i	
A. Carlis	le & Co., Printers, San Francisco	
	CONTENTS	
CORONADO—CONVENTION	N CITY, 1923	43
MUNICIPAL DEVELOPMEN By Dr. B. M. Rastall	NT	45
NEW PROCESS OF RUBBEI	R MANUFACTURE	52
LOS ANGELES WHOLESAL By Gerald Fitzgerald	E TERMINAL	55
THE PUBLIC OFFICIAL AN By Chester H. Rowell	ND THE PRESS	57

PROCEEDINGS OF THE TWENTY-FOURTH ANNUAL CON-

VENTION AT PALO ALTO (Contined)

LEAGUE OF CALIFORNIA MUNICIPALITIES

Affiliated with the Bureau of Municipal Reference, University of California

President, FRANK C MERKHTF, Assistant City Clerk of Oakland
First Viss-President, FREED C WHEELER, City Councilium of Low Angeles
Secretary-Treasurer, M. A. MASON, Bond and Ordinance Expert of the City of San Francisco
Executive Secretary, WM, J. LOCKE

Headquarters: Pacific Building, San Francisco
Official Frinters: A. Carliale & Co., San Francisco
Official Frinters: A. Carliale & Co., San Francisco

INFORMATION BUREAU

The League of California Municipalities maintains in connection with the Secretary's Office, a Bureau for furnishing rity and town officials with information on municipal affairs, and learning copies of new ordinances and specifications. Officials are urged to make a free use of this Bureau. Kindly send a self-addressed stamped envisope in all cases.

Members of the California League of Municipalities

Alameda	Corte Madera	Jackson	Orange	San Rafael
Albany	Crescent City	Kennett	Orland	Santa Ana
Albambra	Culver City	King City Oroville		Santa Barbara
Alturas	Daly City	Kingsburg	Oxnard	Santa Clara
Amador City	Davis	Lakeport	Pacific Grove	Santa Cruz
Anaheim	Delano	Larkspur	Palo Alto	
Angels	Dinuba	La Mesa	Pasadena	Santa Maria
Antioch	Dixon	La Verne	Paso Robles	Santa Monica
Arcadia	Dorris	Lemoore	Patterson	Santa Paula
Arcata	Dunsmuir	Lindsay	Petaluma	Santa Rosa
Arroyo Grande	Eagle Rock	Livingston	Piedmont	Sausalito
Auburn	East San Diego	Livermore	Pinole	Sawtelle
Avalon	El Cajon	Lodi	Pittsburg	Sebastopol
Azusa	El Carrito	Lompoc	Placerville	Selma
Bakersfield	Elsinore	Long Beach	Pleasanton	Sierra Madre
	El Segundo	Los Angeles	Plymouth	Sisson
Banning Beaumont	Emeryville	Los Banos	Point Arena	Soledad
Belvedere	Etna	Los Gatos	Pomona	Sonoma
Benicia.	Eureka	Loyalton	Porterville	Sonora
Berkeley	Exeter	Lynnwood	Potter Valley	South Pasadena
Beverly Hills	Fairfield	Madera	Red Bluff	South San Francis
Biggs	Ferndale	Manhattan Beach		St. Helena
Bishop	Fillmore	Manteca Manteca	Redlands	Stockton
Blythe	Fort Bragg	Maricopa	Redondo Beach	Suisun
	Fort Bragg	Martinez	Redwood City	Sutter Creek
Brawley		Marvaville		Sunnyvale
Brea	Fortuna	Marysville	Reedley	Susanville
Burbank	Fowler		Rialto Richmond	Taft
Burlingame	Fresno	Merced Mill Valley		Tehachapi
Calexico	Fullerton		Rio Vista	Tracy
Calipatria	Gilroy	Modesto	Riverside	Tulare
Calistoga	Glendale	Monrovia	Roseville	Turlock
Carmel-by-the-Se		Montague	Ross	Ukiah
Chico	Gridley	Montebello	Sacramento	Upland
Chino	Gustine	Monterey	Salinas	Vacaville
Chula Vista	Hanford	Monterey Park	Sanger	Vallejo
Claremont	Hayward	Morgan Hill	San Anselmo	Ventura
Clovis	Healdsburg	Mountain View	San Bernardino	Venice
Coalinga	Hemet	Napa	San Bruno	Visalia
Colfax	Hercules	National City	San Diego	Walnut Creek
Colton	Hermosa Beach	Needles	San Fernando	Watsonville
Colusa	Hollister	Nevada City	San Francisco	Watts
Concord	Holtville	Newman	San Gabriel	Wheatland
Corcoran	Honolulu	Newport Beach	San Juan	Whittier
Corning	Huntington Beach		San Jose	Willits Willow
Coronado	Huntington Park	Oakland	San Leandro	MARK . MARK NA
Compton	Hyde Park	Oceanside	San Luis Obispo	Yreka Yuba (
Corona	Imperial	Ojai	San Marino	
Covina	Inglewood	Ontario	San Mateo	Total

Associate Members-Oregon: Albany, La Grande

Pacific Municipalities

AND COUNTIES

OFFICIAL ORGAN OF THE LEAGUE OF CALIFORNIA MUNICIPALITIES Entered as second-class matter March 22, 1913, at the Past Office at San Francisco, California, under the Act of March 3, 1870.

Coronado-Convention City, 1923

Coronado, Convention City, 1923, is nown the world over as the site of the amous Hotel del Coronado, one of the nost famous hostelries in America. It almost as widely known as the home f Coronado Tent City, the most popular ummer seaside resort on the continent. ew people apart from the residents of outhern California know Coronado as a ity of homes-one of the most beautiful nd progressive little cities in the United tates. Its fame in this respect is growing apidly, however, and each year witnesses steady increase in population, reruited in most part from visitors who ind in this favored spot their ideal for places of residences.

The city of Coronado, although comnonly referred to as being located on an sland is in reality on a peninsular, the even miles of sandy soil connecting it with the mainland being aptly called the Silver Strand. This strand forms he great, land-locked harbor, conceded he best on the Pacific Coast and high n favor with the naval authorities. Coronado covers approximately one quare mile and has a permanent populaion in excess of 5,000 which is increased luring the winter months by more than 2,000 visitors. The city has 24 miles of paved streets and five improved parks.

The streets are beautifully adorned with trees and flowers—in fact, the city

generally is referred to as an "all the year round garden." Unsightly districts and "slums" are unknown. The California type of architecture predominates throughout the city, but a number of stately and handsome homes grace the several sections of the city.

Essentially a city of homes, Coronado rejoices in a school system far ahead of the average city of its size. It has a grammar school, recently made the subject of an article in the Ladies' Home Journal which pronounced the local school an ideal one. The new \$125,000 high school building has just been completed and is a handsome and commodious structure including an auditorium and stage available for public meetings of various character.

The city government is under the managerial plan and the affairs of the municipality are conducted in a highly efficient although economical manner. The fire department is rated by the state board of underwriters as one of the most efficient in California. Reduction in insurance rates of from 25% to 50% have been made in the past year, due to the efficiency of the department.

The police department shares with the firemen the honor of a high rating and the deportment of the city is rated as excellent. Crimes and disorders are the exception in this favored place.

that the best conducted business is at the present time, and in the same way and the same sense an example for the rest of the world.

I believe, moreover that the pathway to that development is along exactly the same lines-that we have nothing strange, nothing startling, nothing extraordinary to look for in our search for municipal development or municipal progress, but that we simply have to go back to a certain very few and yet very fundamental laws which have been seized upon by business and made the basis of scientific business precision, which laws will find their application in the same way in municipal affairs. In other words, putting it concretely, if you will ask yourselves what a city is industrially, after all, it is only a collection of stores and factories and other business institutions, the law of the unit being always the law of the mass, and just as soon as we get the law of the unit before us, we can apply that same law to the law of mass development, to the law of the community development, and expect to get the same results.

Socially, the community is but a collection of individuals, and exactly the same thing that has given to American business its security will apply to the community, when we apply the same laws and planning to the development of the American city that we do to American business.

I want to be concrete and practical rather than theoretical about the development of that rather abstruse-sounding theory, and in order to do that, I should like to tell a story which has been a favorite story with me for a good many years, illustrating everything that I would like to say to you, and it is so chosen that a great many of you will be able to check up the statements that I shall give you about it.

Out in Colorado, on one of the prin-

cipal transcontinental roads that run through Colorado, there are two cities or rather a city and a village-Colorade Springs and Manitou, which many o you will have seen. Manitou historically was located very much earlier than wa Colorado Springs, about 25 years earlier as I recall the date. It is located just in the first range of the great mountain ranges there, with beautiful canyon starting within the town limits. It ha gold mines an one side and coal mine on the other. It is on two transcon tinental lines of railroad, and, with very slight stretch, you could say on thre transcontinental lines of railroad, and it has a climate which, anywhere but it California, you would say was idea both summer and winter. It has minera springs which are nationally famous, and whose waters are served on the hote tables in every American city. It i located just between the world-famou Garden of the Gods and the still more famous Pike's Peak. Altogether, you will find it hard to describe a city mor ideally gifted for growth as a combine summer resort, and residential and in dustrial city.

Colorado Springs, on the other hand is located some seven or eight mile from Manitou, out on the beginning o the great western plains, on a flat absolutely uninteresting mesa top. Ther is no reason to put Colorado Springs or a city, at that point, that would no apply equally to any point in the entir district there that you might hav landed on, had you fallen out of a balloon traveling over that country-except on thing; that it is the principal station in that district for the Denver and Ri-Grande Railroad. More about that in It is subject to the grea drouths and tremendous winds of tha western territory. In spite of its name it has no springs-the springs are a Manitou. It has no advantages o urroundings, except as you reach the nountains either through Manitou or brough Cheyenne, another small town ocated about as Manitou is, to the outh. And the only thing in the world hat calls for the development of the own or city there is this railroad.

It so happened, however, that the ity of Colorado Springs was established y a company organized by the same roup of men who built the Denver and io Grande Railroad and created that xtraordinary bit of American railroad istory. They started out to build a ity there, using exactly the same comon sense and upon the same ordinary usiness principles that are used in uilding a railroad. What did they do? In the first place, they laid out a city ith wide streets and ample parks. being dry, they established an irrigaon system, and put running water n each side of each street, so that verybody could have trees and have a arden. They planted trees up and down ach street. They established some ttle parks and developed them graduly. They set aside space for churches, nd set aside a large space in one end the town and induced a college to ome there. They went back into the ountains and produced what they ould properly style the purest of water applies, coming absolutely from the elting snows. They built what was en one of the very finest of American otels in the West, which has ever since en kept up. They adopted the very ever name "Colorado Springs" for a y town. And then they advertisedot very well paid advertising, but if ou will recall, you will remember that er since you were youngsters and gan to follow magazine literature u have seen articles about Colorado, e Garden of the Gods, Pike's Peak, e Rocky' Mountain National Park, d so on, and you probably never saw

one of those articles in your life that did not have the name "Colorado Springs" attached to it. So that Colorado Springs has been kept in the mind of the tourist people as the place from which and in which you could see all those And when people went there. things. they saw a fine hotel, and they stayed there, and as they looked around, the city they beheld was a well-planned city, good streets, good schools, good everything, as I have narrated to you. and they located there, and then when the Cripple Creek gold created a group of multi-millionaires, they came to Colorado Springs and they spent their millions in the development of that city. The result is that Manitou, which had all the advantage, is still the same little village today, almost, that it was 15 or 20 years ago, and you who have seen it know that that is true, and Colorado Springs, located much later, with no advantages except as man came in and. with his business vision and business ability put into the development of the community, he made it what it is. And Colorado Springs is today one of the most worth-while middle-class cities in America, one of the best towns I know of to live in, and reputed to be for its size, the wealthiest city in America.

There is the whole story that I want to try to give you, except that in a few minutes I want to just draw out a few of the facts that seem to be most salient in that story now as proving that the story of Colorado Springs is the story which may be the story of any American community, and that the story of Manitou is also the story that may be the story of any American community; and that the way to be Colorado Springs rather than to be Manitou is by scientific methods of municipal development, which today is seizing upon those same fundamentals of scientific organization that

we have seized upon in business, giving the same successful results.

First, that whole story is based upon the assumption that cities are not made by natural advantages, but are made by human activity. And we only state there a proposition which we only accept as a truism everywhere else in the world. Nature gave us the wild strawberry, a little bit of a berry that you will have to work all day to collect enough for a meal. I know, because I have tried it two or three times. We saw that it needed development, and we proceeded to cultivate it and develop it until we got a berry of the size that is familiar to us all. And that difference is the result of what? - human activity. Every farmer who goes out and hoes and works in the field is the exponent of this proposition that you have before you today, because he cuts off the woods that nature would say are fit to exist. he plants his own things in their place, he sees to it that they have a chance to grow as otherwise they would not have a chance to grow. Business, as a matter of fact, never has based its assumption upon the proposition that natural advantages were the things that created business rather than human activities. The iron ore was put away up in northwest Minnesota, but there has never been any steel manufactured there, and none anywhere near there, until the Duluth plant was put in fairly recently. The iron and coal are brought together at points determined by human necessity and the factors or marketing and production which are worked out, not as the result of natural advantage at all. but as the result of this great human system which is occupying the attention of the world, the needs of which are being studied by manufacturers of iron and other business propositions.

Take the same thing in regard to a city. There never was a more dangerous

assumption in the world than the proposition that because of certain natural advantages, therefore a city must grow and become great or even prosperous. Those advantages are advantages only if they have been organized and crystallized by the application of human energy, just as the single business enterprise, and as I have stated. American cities from one coast to the other, the position of those cities is frequently a temptation, frequently a blind, to the necessity for organized activity, such that I am almost ready to say that the community which has the handicap, like Colorado Springs, and has got out and almost produced its own advantages, is a community better equipped for progress than the community like Manitou, that has all the advantages, and assumes that those natural advantages will take care of itself.

Number 2: The growth of Colorado Springs was based upon the careful development of what you may call its ethical plant-I am jumping right back into private industry again. Anybody who knows anything at all about manufacturing knows that a factory that is equipped with worn-out machinery and bad sanitary conditions and ignorant workmen, is bound to fail: that if it keeps alive at all, it will eke out only the most meager existence. And doesn't the municipality that has a poor plant. bad tools, poor public buildings, and those other things which go with a poor physical plant for a city-isn't that city laying up for itself just as certain a meager future as the factory does? The rules are just exactly the same, and I am so sure of the situation that, without any further argument, I am going to say today that the country over, those cities that are making rapid progress, are making it largely on the basis of sound city planning, the development of good public structures, good water works, good homes, good civic centers, and hings of that character; and that nowhere in America today will you find a city which is achieving rapid, pernanent progress that has not first achieved that sort of a background for progress in the possession of physical fficiency.

efficiency. Take the other side of the shield. No community life is entirely a matter of mechanics. This background of a sound city plant is only one thing that is required. The city is largely a social organization rather than purely business or economical organization, and its efficiency depends upon sound social conditions. I mean that in the very argest sense, and not in a small sense, Every business today realizes the value of good will. Every business today realizes the value of what we call esprit le corps in the ranks of business. There is nothing the progressive, modern business man is paving so much attention to today as he is to the personal training and relationships between the employees and the institution, the training of employees, the development of promotion and pension systems, and all that sort of thing. And why? Because he knows that sound social conditions in his plant, contentment, support, the good will of his employee, is the most effective thing he could have in it. Apply that same situation to a city. I like to put it briefly in this way: that a city needs team spirit just as much as any football team ever needed it. What is the difference between the football team, and the aggregation of eleven ordinary people that you could To out and pick out? There is an organization in the team, in those eleven men. There is a certain amount of equipment. There has been a definite period of training, so that they act together. But, more than that, there

has been the development of that thing that we call team spirit, that being without which no group of men, however strong, can hope for success, that thing which, when it is possessed, seems to double or triple the power of the men who make up the team. There was a team playing there that day that had on it. I presume, some of the greatest stars of football in America. There was Poe, and the famous captain of the Carlisle Indian team-the entire team built up of men of exactly that character. every one of them a man who had scintillated in college football history. That team was on Thanksgiving to play a team of Washington & Jefferson, a comparatively small college team in Pennsylvania, which at that time was making no football history. It was just an ordinary middle class college teamit could not be classed otherwise. That team of unknown players just played wings around that great aggregation of stars. And why? The college team, full of spirit, full of tradition, were willing to train and get in and practice as no team of stars were ever willing Furthermore, each man was willing to subordinate himself to the team, and it was a case of a team against a group of stars, and that team did a thing that would appear physically impossible as we are talking about it here-practically impossible.

That same team spirit is essential in communities. Because a very vital thing in every American community that would show an advance, a development of esprit de corps, a development of willingness to accept leadership, and, once you have carved out a vision of what you are going to do, of sticking to it, of serving in the ranks, realizing that when a man is chosen as leader, you have got to stick with him, even though you disagree with him as a matter of detail. Don't forget that in the case of

the college football team, they elect the captain. You may disagree entirely with the style of play of that captain, but you stay with the game as a member of that team clear through that season, if you develop a real spirit that makes a winning team. That same thing is just as essential in our community affairs, and is one of the places, by the way, where the average American community today is most woefully falling down. Take the element of good will for a community. Everybody knows how vital a factor is the good will of any business today. By proper advertising by good salesmanship, a concern may achieve a name for its service, for certain delivery, for the quality of its product, that will keep people systematically and continually coming to his establishment, because of that feeling of friendship that has developed for him. The reputation of a community is just as important to that community as is the reputation of a business to a business. And we have the problem of developing scientific community methods of building up, through honest treatment to the stranger within our gates, and our people generally, that same sort of good will to the community that we seek to build up for a business, for its development.

Now, there are three or four things I will just touch upon before closing. Fiscal, social and economical basis are the three important points of view for the commercial organization, of organizing the community into this modern team. Now, fiscal for two reasons, first, because it is absolutely impossible to build the sort of a city which Colorado Springs built, except through the expenditure of a very substantial quantity of money. No poverty-stricken community can possibly make itself into that kind of a city, because it can't furnish the capital. Sound business

conditions, growth of business, business prosperity—those are absolutely essential in these days to the growth of the sort of city we are trying to vision, because the only way in which the growth and development of your city can be made possible is through sufficient financial strength.

Another angle on that: In order to achieve that business success, substantial growth in size and numbers is essential, Coming back again to a very, very material basis, there is no such thing in nature as a static condition. Every living organism faces the necessity of continuing to grow in stature and in powers. The minute it stops growing it does not stand still, it begins to fall back. And that law, which is the universal law of the individual, is also the universal law for collections of those individuals which we call communities. The minute your community stops growing in numbers, in business importance, in increase in the natural flow and development of business enterprises, it starts to go back, because your overhead keeps on growing, despite anything you can do, and eventually it submerges it, just exactly as it does in the business enterprise that stands still and ceases to grow.

It is of very vital necessity, therefore, for the modern community, that it look to these things, and that it realize the importance of the plan for the city, and the importance of a program for the city.

Finally, along these general lines, there is just one point I would like to stress: the necessity for planning, not in the usual sense in which city planning is used now, but from the point of view of planning your work. No business ever achieved great success in which some man or group of men did not burn the midnight oil, and give himself unremittently to visualizing that business,

nd, after he got it visualized, in which ne man did not lay out a task for himself nd stick to that religiously, day and ight, year in and year out, until he had hade it warp and woof of his very life. ad finally driven the thing through n that line. The great difficulty with ur efforts for city development at the resent time is, first, that we try to do oo much, and, secondly, that after we ave started jobs and got them well nder way, instead of sticking to them. olding onto them for dear life, and utting them through, we let ourselves e taken off to some other field-we catter our energies. It is absolutely a act that if we are to achieve the growth of progress that we look for in American ities, that we first carve out a program. elect it carefully, and having selected it. hen year by year, keep at just the numper of concrete things that we can dequately handle, and having done hat, organize ourselves like a football eam, stick to those things and play the hing out before we go on to something else. I think probably four-fifths of the ailures of our civic and commercial and governmental efforts today is due to the failure to do exactly that one thing, essential everywhere else for success, and therefore just as essential n civic affairs.

And finally, just a word about governnental efficiency. One of the most vital things that I could have talked about as the relation between efficiency of city government and general growth and progress of the city. It is one of the four or five things that I set up as absolutely fundamental to the civic progress. And

Under that city government, a host of things, such as the building and operation of public works, including your waterworks system, and the building and conduct of your school system, the building and operation of your streets, the planning and construction and government of the city at large, health and sanitary protection, police and fire protection, the whole group of things, every one of which is vitally hooked up with the efficiency of that community and vitally hooked up with the possibilities for social and business growth in that community. I look for the coming of the day in America when the Chamber of Commerce and the officers and executives of city government shall work much more closely hand in hand, meet around the table and discuss their problems, work out the future of the city ten years ahead, and then, as a single team, each handling his own part of the game, but in thorough cooperation, working out the growth and development and the progress of the cities which we look forward to with hope. Only under that sort of complete cooperation is it possible to develop that city that I am trying to visualize with you this morning, scientifically as soundly organized as any business enterprise ever was, and achieving as spectacular results in growth and progress and just as certainly as that has ever been achieved by the most spectacularly-developed business enterprise, because we have seized hold of exactly the same methods and are applying them with exactly the same or an even greater degree of efficiency, (Applause,)



New Process of Rubber Manufacture Announced by the United States Rubber Co.

Announcement has been made by the United States Rubber Company of the development of two remarkable new processes of rubber manufacture.

Rumors of some mysterious new process of manufacture which have been agitating rubber circles in this country and Europe for several months are explained by the announcement. The rumors have centered about the fact that large quantities of rubber have been arriving in this country not in the ordinary forms of crude rubber but in the original liquid state in which rubber comes from the trees.

The discoveries are regarded as the most important developments in the rubber industry in many years, and are being scrutinized with the closest attention by the entire rubber world.

One process covers a method of extracting rubber from the latex (milk) of the rubber tree. The method is so new and effective that a crude rubber of a quality never before known is made available to the world.

The second series of patents covers a process of treating fabrics and cords with latex, making it possible to manufacture tires and other articles with a degree of strength hitherto impossible of attainment.

Taken alone, either one of the discoveries would be regarded as of the utmost significance, but together they are hailed as the most important advance in the field of rubber manufacture since the discovery of vulcanization nearly a century ago.

Speaking of the new processes, the India Rubber World, mouthpiece of the rubber industry, says in its current issue:

"By the combined use of this rubber and the latex treated fabric, the United States Rubber Company is in a position to make its products of a quality that cannot be surpassed by any product or process now known."

The new processes have been perfected by the Development Department of the United States Rubber Company, whose chemists and research engineers have devoted years of experimentation to this new field.

The new method of extracting rubber from latex is mechanical and of too technical a nature to be described here. It supplants the method now in universa use on the plantations whereby the particles of rubber in the latex are coagulated by the introduction of chemicals into the latex just after it has beer taken from the tree, and also supersedethe more ancient method used in the jungles of Brazil of smoking the later in the smudge formed by burning uricuri nuts.

Rubber produced in the new way i found to show a substantial increase is tensile strength and resistance to abrasion—two vital matters in crud rubber. It also shows a degree of uniformity never before attained. Thoughthe United States Rubber Companitiself is modest in its claims regarding the superiority of the crude rubbe coagulated in this way, other rubbe experts do not hesitate to predict that the results obtained will completel revolutionize coagulating method throughout the world and give to cor

umers rubber goods of a distinctly

Several coagulation plants of the new ype are now in operation or in the ourse of construction by the United tates Rubber Company both in the Inited States and the Far East.

The new web fabric process, in its mediate aspects, is of even greater interest to the rubber industry in this country than the coagulation process ecause most of the work of coagulation as been done at the source of crude ubber supply in distant countries, thereas the use of latex—rubber in the quid form in which it comes from the ubber tree—will introduce into Amerian trie and rubber factories methods of sananufacture that are entirely new.

The American manufacturer has been accustomed to receiving his crude rubber on the form of slabs and sheets, which whre about as tough and dry as shoe eather. The first step in his process of manufacture has been to make this bubber soft and pliable enough to be worked. To bring this about he sends the crude rubber through a chain of machines, huge and powerful, which by sheer force rend and tear it and masticate it until it becomes a soft mass, a process necessarily harmful to the rubper. For some other purposes he makes a solution of the rubber by combining it with benzine.

In almost all so-called rubber articles of commerce, some sort of fabric—susually of cotton—is used to give body and strength to the articles and in a large measure the wearing qualities of the article depend upon the construction of this fabric part.

In many articles, especially tires, it has been learned by experience that the more completely each strand of cotton can be covered or permeated by rubber the better the wearing qualities. The chief faults with former methods of uniting the rubber with the cotton fabric have been due to the fact that it has been very difficult to force the rubber dough into the body of the cotton goods with sufficient success to do more than furnish a very superficial covering to the different strands and, on the other hand, to the fact that when rubber has been used in the form of a solution the effects of the chemicals have a harmful effect on the cotton.

The United States Rubber Company has found that if a thread of the fabric is immersed in rubber latex, the rubber penetrates to the very center of the strand. In fact, a microscopic examination of individual cotton fibres so treated shows that the rubber is present in the hollow tubular structure of many of the individual cotton fibres.

Threads so treated with rubber latex, whether individual or comprised in a knitted or woven fabric, have very great advantages over threads or woven fabrics treated by the processes heretofore in use, when associated with rubber in the vulcanizing operation.

The whole object of rubberizing the fabric is to cause a real union of the rubber and the fabric to occur in the vulcanizing process. When an article is in use, it rapidly begins to deteriorate when this union is broken. In the case of tires, the breaking of this union is called "separation" and is usually the initial stage of destruction, which proceeds rapidly from this point on. With threads treated with rubber latex, tests have shown that the union lasts very much longer than is the case with threads treated by the processes heretofore in use.

Machinery of extremely simple character has been developed by the United States Rubber Company for passing cords and fabrics through a latex bath.

"These two important developments," says the India Rubber World, "result in great advantages to both the plantations and the rubber manufacturers.

"From the plantations viewpoint, it means the simplification of the process of converting latex into crude rubber suitable for use by the rubber factory with possible savings over the present costs, and because of the absolute uniformity and high quality which the Hopkinson process gives it should mean greatly increased quality of the vulcanized article.

"To the rubber goods manufacturer these developments mean that the end he has so long sought—a pure, clean rubber of absolute uniformity and highest quality—has been attained."

One especially important phase of the discovery that rubber latex may be utilized in manufacture is the fact that thereby there is opened up a wide, new field of experimentation which will almost certainly result in a great increase in the uses to which rubber may be put.

Handling rubber in liquid form in large quantities has meant many changes in the plantation work of the United States Rubber Company. Tank wagons are now in daily use. The latex is transported by tank cars to the nearest port and placed in storage tanks, later to be pumped into the tanks of steamers for shipment to the United States. Arriving in this country the latex is again pumped into railroad tank cars for transportation to the factories.

City Cleansing Services on Strictly Municipal Basis

Philadelphia Eliminates Contract System for Street Cleaning and Ash Rubbish and Garbage Collection and Disposal

For many years Philadelphia remained the one large city in the country whose street cleansing services were in the hands of private contractors. Aside from

the efficiency of the work, the political as pect of this manner of doing business was intolerable. The work was done by contractors who were also political bosses The rule that contracts were never let for more than a year at a time successfully eliminated independent contractors, and it was only after years of agitation that the new charter was able to secure for the city the power to do its own street cleaning. Beginning with January 1 of last year, all the city cleansing servicesstreet cleaning and ash, rubbish and garbage collection and disposal-were put on a direct municipal basis in all districts. Since then there has been general satisfaction with the service rendered. The budget allowance for the past year was considerably less than that for previous contract work, although this was to be expected because of lower price levels. It is probable, however, that a saving over the budget allowance will be made.

·-·National Municipal Review

PUBLIC SALES

We have purchased 122,000 pair U. S. Army Munson last shoes, sizes 5½ to 12 which was the entire surplus stock of one of the largest U. S. Government shoe contractors.

This shoe is guaranteed one hundred per cent solid leather, color dark tan, bellows tongue, dirt and waterproof. The actual value of this shoe is \$6.00. Owing to this tremendous buy we can offer same to the public at

\$2.95

Send correct size. Pay postman on delivery or send money order. If shoes are not as represented we will cheerfully refund your money promptly upon request.

National Bay State Shoe Company

296 Broadway, New York, N. Y.

CONCRETE CARRIES HEAVY TRAFFIC AT WHOLESALE TERMINAL

By Gerald Fitzgerald, Vice-President and General Manager, Los Angeles Union Terminal Co.

Los Angeles, Calif., has in The Wholesale Terminal, a development which has been termed the most modern and efficiently equipped plant of its kind in the United States. It includes a produce section in which 80 per cent of the wholesale fruit and produce business of Los Angeles is conducted, and a warehouse section which is laid out and equipped for the most economical handling of the business of wholesale, manufacturing, warehousing and distributing firms. The Terminal has 2,000,000 square feet of floor space in its six reinforced concrete buildings, and the buildings aggregate over a mile in length. A new four-story unit, providing an additional 220,000 square feet of floor space is now being built of reinforced concrete.

The need for a centralized wholesale terminal district exists in many cities, but while in most cases activity toward securing such a district has been confined largely to planning, in Los Angeles private enterprise took up the problem during the war period, and carried through an extensive building program. At present 230 wholesale and manufacturing firms conduct their entire business in The Wholesale Terminal. For the accommodation of these firms, there are located in the buildings a bank, hotel, printing plant, 100 suites of office rooms, telegraph offices, restaurants, public warehouses and other facilities

Quarters for the wholesale fruit and produce market are provided by three two-story buildings surrounding a paved court 1,200 feet long by 200 feet wide, in which there are stalls for 500 teams and trucks to accommodate farmers selling fresh produce. This space is crowded daily with vehicles of all sorts. On the areas used as driveways, concrete pavement was laid because of its durability and non-slipperiness. Another type was placed on the areas assigned to stalls, but experience has shown that concrete would have been preferable. Concrete paving is being used on all new work subject to vehicular traffic.

The first concrete pavement was placed in 1918, and to date about 19,000 square vards have been built. Four thousand square vards additional will be laid alongside our new four-story unit. The payement is mostly 6 inches thick, of 1:2:4 concrete, although some sections are as much as 8 inches thick, Expansion ioints are placed at 35-foot intervals. Pavements in the produce market are subjected to traffic 18 hours a day, as the market opens at midnight and closes at six p. m. Traffic officers are on duty at The Terminal and they divide their time between the market section and Terminal Court, which is filled all day with heavy drays and motor trucks serving the manufacturers and wholesalers located in the warehouses.

In very few localities will there be found such concentrated, steel-tired and motor truck traffic as at The Wholesale Terminal. The resistance of concrete to wear, its safety, sanitary qualities and low maintenance make this the ideal pawement for such service.

Frequent, rapid and noiseless switching service is performed by the electric locomotives of the Pacific Electric Railway Co., which handles freight to and from all railroads entering Los Angeles.



VIEW OF LOS ANGELES WHOLESALE TERMINAL

The Union Terminal Warehouse Company operates the largest and most modern warehouse in Los Angeles at The Terminal, to which merchants needing storage space for a limited time only can have merchandise consigned and stored; and if goods are shipped with draft attached, financing can be arranged by the Warehouse Company whereby the banker will surrender bill of lading to the Warehouse Company and accept warehouse receipts. This makes possible the purchase of carload or cargo lots with a limited cash outlay. An office section is maintained for brokers, manufacturers' agents and factory branch representatives, and adjoining this office section display and sales rooms and warehousing space are provided. handling perishable goods, a large public cold storage warehouse is also maintained.

To meet the demand for warehouse space a new four-story building is now under construction. Like the others, this will be of Class A reinforced concrete throughout, and will be equipped with electric elevators, spiral chutes and other labor saving equipment for handling goods. The lowest fire insurance rates on merchandise are assured, as the automatic fire sprinkling system in connection with the concrete construction reduces this hazard to an absolute minimum.

Much credit is due John Parkinson. supervising architect, for the careful design of The Terminal and the thorough execution of the plans and specifications, and to the Wurster Construction Company of Los Angeles, San Diego and St. Louis for the efficient and rapid construction of the entire group of buildings during the war period when it was necessary to surmount many difficulties. F. V. McPeak of Los Angeles, who had charge of the construction of the concrete pavement, deserves much credit for the excellent manner in which this part of the project was carried out and the good results obtained.

THE PUBLIC OFFICIAL AND THE PRESS

An Address Delivered Before

The League of California Municipalities, Stanford University, California
Thursday, September 21, 1922

By

CHESTER H. ROWELL.

Member of the Railroad Commission of California.

Mr. President and Ladies and Gentlenen: I want first to congratulate you on some of the other things that you have been talking about, and particularly the questions of public health. President Wilbur made one remark that struck me very forcibly, and that was that the important thing is not to substitute theories or notions for the facts of life. That is perhaps the most fundamental thing that can be said, not merely as concerns questions of public health, but everything else with which you have to deal. Just apply it to the subject of public utilities. If the awards of regulatory bodies on the subject of public utilities can be based on the facts, on all the facts, and nothing but the facts, you will find that all your problems will solve themselves very easily. Those, of course, are the things that you have been discussing. I am not here to discuss them, but I could not forbear a word upon that very excellent commentary of President Wil-

I have been asked to talk to you something about the relations of the public official and the press—I suppose because it is notorious that I have had considerable experience with both ends of that problem, and I have probably had the painful experience that you have had at one end, and the experience which newspaper men (and I hope none of you) have had at the other end, but which I, at any rate, as a newspaper man,

have had with some public officials. In other words, upon the one side is the public official, and I don't think it has ever happened, even once, that the newspaper reported anything that I was intimately connected and acquainted with, that I knew all about, and got it right. I believe I may say that every time they have got it wrong—always. And you have probably had that experience.

Well, conversely, as a newspaper man, I have had the experience many times of finding out that what the public official wanted was something less than all the truth, and he wanted that somewhat later than it would be news. So the newspaper man has some difficulties with the public official, too.

I don't know that I can give you any final answers to some of the questions that naturally arise in connection with this topic, but perhaps I can ramble on about some of the problems we have and some of the things we have to do with them, and say something that will have some little interest to you, first, from a purely practical side, of dealing with the thing as is, and then perhaps some speculations on the larger subject of what we hope the future will have in store for us on the thing as it ought to be, though none of us have any illusions that we can bring that about.

Let us take it from the side of the public official first. The public official has to deal with the reporter, and he has to deal with the editor, with the responsible proprietor or controller of the newspaper. In dealing with the reporter, he knows the reporter's faults very well, but let me suggest that not all of your troubles with the newspaper are due to the newspaper's fault. Some of them may be due even to your own fault, too. Let us consider, then, the general problem of that side of your difficulties and your tactics with the newspapers. The newspaper reporter ought to get your side (I will come to that in a minute), and you ought also to get his. There are certain things that I think it worth while to remember in dealing with the handling of the news of your departments. For one thing, I should say it is absolutely necessary that you are to deal squarely and impartially and fully, give a square deal to all the newspapers, even those that don't give it to you. The mistake is sometimes made, that if one newspaper treats you fairly and the other one does not, then you slip the news to the one that treats you fairly, and unfairly keep it away from the one that does not treat you fairly. Sometimes, in case of the disagreeable individual reporter, that may be necessary. If he is the sort of man you simply can't deal with honestly, who will lie about you, who won't deal with you squarely, who won't keep your confidences, just kick him physically out of your office, don't let him in, inform his employer that he can't come inside your office. That you may do with the individual, if the case is extreme enough. Otherwise, as I have said, deal evenly and squarely with all the newspapers, even those that do not so deal with you.

There are a good many concrete things that come up in that. For instance, a square deal or an even break as between the morning and the evening newspapers. And here I am talking more in detail, more technically than I would to a general audience. It is easy enough to arrange a deal between the two that is not square. For instance, I knew a man who always held a meeting just at noon in his office every day, and gave out the news just at noon, and he thought that was a square deal. He said "You can come around at noon, and whichever one of you gets it first, that is his luck." And of course the evening paper, of which he happened to be in favor, always got all the news first. That isn't a square deal, isn't the square deal that should be accorded the papers. I have known printed publicity to be given out upon the express requirement that it should be given to certain newspapers and kept away from others, on the ground that those other newspapers were crooked, that they would garble it, that they would misuse it, and therefore they must not be let have it. Don't do that. If they misuse your publicity, find some other remedy than that. I say that from the standpoint of the newspaper, I think they have the right to expect an absolutely even break and a square deal on the giving out of the news, and don't play any favorites, even to the extent of acting in favor of your friends or against your enemies.

Then remember also that the newspaper is going to deal with the thing absolutely from the news standpoint, that the newspaper does not print news because it does any good, it doesn't keep out news because the printing of it will do harm. Things are not put in the newspaper to do good or do harm. They are put in the newspaper because they are news. It may be that that is a narrow view. It may be that the news is not the greatest and most sacred thing in the world. But anyhow, the newspaper is run on that principle, and there is only one reason for printing news, and that is because it is news, and that is a onclusive reason for printing it, whether t does good or harm. And the fact that t is not news is a conclusive reason for not printing it, no matter how much good t will do. The eternal varieties are not news. The ten commandments are not news. The thing that happened day pefore yesterday is not news.

That brings up the time element. One of the mistakes of people in dealing with reporters sometimes, for instance, to say, "The last signature is not on this, and the last opinion is not rendered. It is not finally and officially finished. I will give it to you in detail and accurately day after to-morrow, after that is all done." Meantime the other newspaper is going to print it. Now, the news is news, not when it is technically finished, but when it is actually ready. And if you refuse to help the reporter by giving him the facts right when it is really news, don't blame him if he prints it as near right as he can give the facts, even if it is not very near right. Because, as I say, the facts as they understand them are going to be printed thenthe time element is more important than anything else from the newspaper's standpoint.

To illustrate: A tremendously important event happened up at Sacramento day before yesterday. All the party conventions of all the parties met, and they did important things. I read with great care all five accounts in all five of the newspapers in San Francisco, and, except from what information I have from private sources elsewhere, I don't know anything about what happened there in Sacramento. The reason was not that most of this could not have been printed, what happened-some of it could-the main thing there is, that the newspaper goes to press at a certain hour, the morning newspaper goes to press early in the evening, and the evening newspaper goes to press early in the morning; and the requirements is to get it in on time—something. You have to reckon with that, too. And the time element is more important than all other things. If you can cooperate with the reporter and help him to get it in and ready on time, you will help yourself and him both. But he is going to get it in on time anyway, right or wrong.

So that some of these things (and there are faults in the newspaper business) are inescapable faults, and the thing for you to do, is not to resist them, not to say they are wrong, or, to say they are wrong if you want to, but not to have any idea that you can improve them, but rather to deal with those things in the business sense as is.

So, too, on the question of fairness, and on certain questions of the honesty, the trade ethics of the newspapers. The ordinary, unskilled citizen always has the notion, and even the public official sometimes has the notion, that the main thing to find out about the newspaper story that you don't like is "who put that piece in the paper." That is the one question you can't get answered, and it isn't any of your The question whether the thing is true or not is decidedly your business. But the question of which fellow peached in the first place isn't any of your business, and in the second place, whether it is or not, the fundamental rule of ethics in the newspaper business, the one and only moral principle that all the newspapers live up to, is the principle of protecting your informant. So if the newspaper says that a certain public official is a thief, you have a right to call on that newspaper to furnish the evidence, to prove it, or to tell you where you can get it. If the newspaper has no power to use the subpoena to compel the attendance of witnesses you have, or the courts have

for you, and the newspaper has a right to tell you which witness you can find out from, whether it is true or not. But if what you want to find out is, not whether it was true or not, but who peached, don't ask that question, and if you do, know perfectly well that it won't be answered. It won't be answered even if the court commands it to be answered. The newspaper editor will go to jail and stay there rather than divulge it. So, when you are against that one feature of newspaper ethics, of protecting the newspaper's informant and keeping his confidences, remember that that moral principle at least, the newspaper won't break. Or, if there is one man that does, you may know that man by the moral scorn of all his fellows, because that is the only crime that they won't forgive.

Also, you can take advantage of that fact. You may not be able to trust or be willing to trust a newspaper man on anything but that one thing; but on that, you can. President Roosevelt introduced it as a principle in the White House, that whenever there was a secret that simply must not be printed, he kept the secret by calling all the newspaper men in and telling them all all about it in confidence. If he had tried to keep it from them, some of them would have found it out, either correctly or incorrectly, and they would have printed it. But when all of them knew all about it in confidence, they didn't print it. Or, if there was one of them who did, he did not need the President's scorn, to kick him out of the profession. After that fall, his associates would simply brand him as being kicked out.

So, if the newspapers have a few virtues, you might as well take advantage of those, and use that formula, that the way to keep the thing out of the paper, if it must be kept out, is to tell all the reporters all about it in confidence.

Another thing: If a newspaper reporter (and I am still talking about the reporters that you have to deal with immediately not the proprietors-we will come to them later) won't deal with you fairly, if he insists on lying about you, go to his editor and tell him that that man is a sneak, a liar, and you can't have anything to do with him. If it is the fact that he won't tell the truth about things, that is the thing to do. But if, instead of that, his fault is that he has it in for you, that he is just prejudiced against you, that he always uses the facts to injure you (that sometimes may be true, I don't know, you are not the best judge whether it is or not); when that is the complaint, not that he lies about the facts, but that he is prejudiced against you, and he has it in for you, the chances are you won't be believed when you tell the editor that. You may be right about it and it may be true, but the editor won't think so, because he has heard that complaint so often when it is not true that he does not believe it when it is. So you may go impersonally to him to say that he lied about the facts and in person to show that he is prejudiced against you, and then you will get your hearing.

That constitutes a few of the things you need to know in dealing with the More difficult, perhaps, is dealing with the editor, because I have sometimes thought that what you need to reform in the newspaper business is to fire the proprietors. Most of the bigger newspapers, at least, have a staff that could run them right right now, without changing a man, and would if they were left to themselves, and the reason they are not run right is because they are not left to themselves. If your situation is that you tell the reporter the truth, and he is intelligent enough to understand the truth, and lots of reporters are not, but if this one is,

and if he writes the truth, or wants to write it, and his editor won't print it, if his editor insists on deliberately distorting the truth when he knows the truth, then you just go to the editor and tell that editor that he is cheating his readers, and tell them so too, and don't be afraid of that editor. Because when the editor is fighting you by lying about you when he knows it is a lie. he is cheating his readers, and you don't need to be afraid of him. One man in the right on a question is stronger, even with the limited access to the public that one man has, than any editor is, no matter how efficient the mere machinery of print is.

And that evil does exist and does exist a lot. For instance, in this very story I was speaking of, the story of these political conventions on Tuesday, some of the stories were all wrong, from stupidity on the part of the editor, and some of them were decidedly all wrong on account of the unanimous anticipation of the politicians and the editors of San Francisco, which is to the effect that there is only one political question that is important or interesting, and that is the "wet" or "dry" question, and there is only one side of that that you dare print, and that is the "wet" side. They are all convinced of that. They are all convinced that that is the unanimous expectation of their people. So part of the story was distorted, that the reporter quite correctly understood, but if he wrote part of that and incorrectly, and it were on the wet side, it didn't make any difference whether he omitted all the rest or not. Some of them got it all wrong. For instance, if you read Ned Hamilton's stories in the "Examiner," if that was all wrong, it was not for any other reason than that he had to get it in early, and most of what is there narrated has not happened at the time that he has to write. (Laughter.) But some of it gets all wrong because the newspapers in the city want the news stated as if things went their way, whether they did or not.

That, finally, is the most serious of all, because these other things may be funny, and they may be ridiculous, and they may be stupid, but you can live with them. The only thing you can't live with is the deliberate distortion of news for purposes of policy. That is not the only crime of the newspapers, but it is the major one, the only one that ought to be a capital offense. a major felony. I don't mean by that that the newspaper man hasn't the right to take the side you think is wrong. He ought to take that frequently, and he ought to make arguments that you think are vicious or specious. If he does that, your answer is to make better arguments, more reasonable ones. If you can't convince the people that your arguments are better than his, that is your misfortune. But he must not lie about the facts, he must not suppress the facts because they are on the side he does not like, and he must not distort the facts because they are as distorted on the side he does like. That is the major crime of the newspapers, I repeat. It is a crime on a much wider scale than the mere fact that it is an injustice to you. If the newspaper is unjust to you, if it makes your career in office uncomfortable, or if it finally terminates that career and put somebody else in, that is not a major evil from any standpoint but yours, and probably not even from yours. But we have now government by newspapers and I can't see far enough ahead to see when we will ever have any other sort of government. There may be some other sort some day. But as far ahead as you now need to reckon with, we are going to have government by newspapers, and we are

going to have it for just physical reasons. The newspaper man is not any wiser than anybody else. You can probably prove he is not as wise as you are. He has not even better means of information than some other people, though he has better means of information than have most people. But he has the means of going to all the people, and it is physically impossible to do it any other way. I am talking now to a hundred or two of you, and it happens that you are important because you reach thousands of others. But nobody ever talks to an audience of over ten thousand, and very few people ever talk to an audience of that size, and then only a few times. I have done it, I suppose, a half dozen times in my life. Very few people ever do it at all. I have talked in print to a million people every day, and that means that my audience, through print, in one day, every day, is almost the combined population of all the audiences I will ever address orally in all my life. That is true of most people who have access to print. Just as a labor-saving device, print so out-ranks all other means of publicity combined, that there simply isn't any competition.

Now, the more democracy we have, the more rule we have by the people themselves directly, and they are doing it rather than leaving it to you as their few wisest men, and you may have observed that we are hearing more of itthe more direct democracy we have, the more advantage this physical command of printing is, because it can reach all people all the time, and nobody else can reach anything more than an insignificant part of the people once in a while. So that, for better or for worse, we are going to have government, if not by newspapers, at least through newspapers. If it is by newspapers, it becomes tremendously important that the autocrat should be the

right one, and notoriously they are not. The next best thing is to have it through newspapers, and that you can live with. Because, if you have government through newspapers, and the newspaper is a transparent medium, you can get along. And the newspaper can use all the argument it likes on the right side or the wrong side, and that does not necessarily do any harm, because if the arguments are stupid, the people won't believe them. and if the arguments are biased, the other newspapers will have arguments biased on the other side, and, moreover, any person's individual intelligence is a sufficient remedy against false arguments. When you read a false argument, you know that you think that argument is false, at least, and you have reason for thinking so. But when you read a false fact, you have no means of knowing whether it is true or false, except in the few individual cases where you happen to have individual knowledge, and those cases can never cover very much.

The newspaper has, in the first place, the most wide-spread machinery for getting information that ever existed in the world. In the second place, it has a means of spreading that information so much more efficient than anything that can possibly compete with it, that as to the gathering and giving out of information, the newspaper is the whole thing.

That being the case, and being fore-doomed to remain the case, at least throughout the life of this generation, it is enormously important that newspapers should recognize that responsibility. And you, in dealing with them, have the right to insist on it. If the newspaper, as I said, argues the way you think indicates he is prejudiced and mean and hostile, and it is unsatisfactory to you—all right, that is the newspaper's privilege. But if the newspaper's privilege. But if the newspaper's privilege.

paper won't print the facts, if the newspaper distorts the facts, then it is committing a crime of cheating against its own subscribers, and is committing a public crime against the people, and against that you have a right to protest. you have a right to go to the editor and protest to him, and tell him that he is cheating his readers, you have a right to go before the readers and tell them that he is cheating them. And you have a right, too, to appeal to them not to take that paper. And when there is but one paper in the town, it is an efficient remedy. There are many times in which the only question is between one leading paper and the other, and in that case I don't know of any remedy except the one I have taken, which is to take them all. That doesn't punish any of them, but at least it protects you. You can, ordinarily at least, safeguard yourself against the delusions of one by balancing against them the delusions of the other, and sometimes out of it you may find the truth, or if, as in the case of the story I was just telling you. you don't know anything about it after you have read them all, at least you know you don't know, and that is the next best thing to knowing.

Yet it is a tremendous public issue as to what we shall do with this situation in which the newspapers have not only the biggest single power, but that they have most of the power, when they are so flagrantly abusing it. I know some things to do about it, and yet they are not enough; but frankly, I don't know the rest. Some things can be done, of course. You can arouse public spirit, you can arouse public disgust, you can arouse the spirit and disgust of the people to the point where they won't take the paper that treats you unfairly, or that won't respect it. That does some good some of the time. The papers themselves must do a great deal towards

I think something can be done towards it by the development of professional ethics inside the papers. That has already worked in other professions. There are shysters among the lawyers, and there are quacks among the doctors. But they are not tolerated by the other lawvers and the other doctors. There is a standard below which, if any lawyer falls, he is under the contempt and scorn of his fellows: and there is a standard below which if any doctor falls, he is ostracized as a quack by his fellows, as an unworthy man in the profession. Now, the same thing is true in the newspaper profession as to the narrowest standards of purely professional ethics, like the person who betrays a confidence. He is under the absolute scorn of his fellows. There is yet to be developed a larger standard of ethics and a standard for editors and proprietors as well as a standard for reporters in their dealing with the news. Those standards can practically all be reduced to just a single phrase, and that is: "Every public decision for a public reason." That does not mean that the decisions will always be right. Whatever view you take upon any controverted public question, somebody is going to be on the other You can't get unanimous agreement on anything. But you can get unanimous confidence, you can get the unanimous feeling that this newspaper has reached its public conclusion for a public reason, and then if you think that conclusion is wrong, that is your privilege, and there are always going to be some who will have that view. But that newspaper can maintain public confidence, it can earn public confidence, if it does that. And of course, if the newspaper is run by a crank whose public reasons are characteristically and always wrong, it will go the same way as the business will go conducted by a business man who runs things on his own

judgment where his judgment is nearly always wrong that sort of thing is a failure. But in business, a business man must use his judgment on thousands of things that he can not know enough about to know whether his judgment is right or wrong. That is the difference between the business man and the scientific man. The scientific man is trained to suspend judgment until he knows. The business man must often act before he knows. Decision is the essential thing with him. And the business man who takes pains to know whatever he can and to get all that knowledge wherever he can, who has a sort of horse sense judgment so that he is right oftener than he is wrong on the things on which he must act before he knows-there is a successful man.

So the publisher or the responsible head of a newspaper who always acts from public motives and is right oftener than he is wrong, is a safe leader. If he is a crank and is characteristically wrong all the time, he simply blows up and nobody has any confidence in him.

Now, it seems to me that public scorn from the outside and a better professional sense on the inside will finally make that sort of professional owner, that standard of professional owner, the only one in the newspaper business under which a newspaper can escape the scorn of the other newspapers. But nobody can pretend that that time has been reached yet. And it is harder in the newspaper business than it is in the other professions. You don't need any capital in the legal profession, except what is inside your brain and enough to eat while you are waiting for practice. The same thing is true in the medical profession. In the newspaper business, the proprietor, if it is a big newspaper, has to be a rich man. That limits the field. It not only means that there are only a few men who can be

newspaper proprietors, but it means that a large share of them are going to have other interests or other friends or other motives than the newspaper business. And the newspaper that does not have to consider even its own success, that may do a thing that is bad policy for the newspaper, that loses it money and loses it confidence, and can still go by the support it gets from some other support than itself, is a subsidized newspaper indirectly, and in the very nature of things, the very fact that it takes a lot of money to own a newspaper automatically subsidized those newspapers through other interests. I don't know what the cure for that is: I don't see any. It rather looks like a hopeless situation, and vet I am not pessimistic enough to believe that it is entirely so.

Just taking the matter from the standpoint of the newspapers themselves, it seems to me they need more character at the top and more intelligence at the bottom. The trouble with the reporter is frequently just lack of sense. hasn't intelligence, and he is the irresponsible sort of fellow who doesn't care, anyway. That can be cured by the proprietor. You can get reporters that have intelligence and responsibility, but they cost money. They are more expensive than printers are. And do you know that one of the struggles inside the editorial department of a newspaper office has been to keep the wages of the ordinary journeyman reporter as high as the wages of the ordinary journeyman printer, and it has been practically impossible, because as fast as you squeeze the wages of the average reporter up to greater efficiency, the typographical union promptly raises the wages of the printer higher, and then it may be a long time before you can get the average wages of the reporter up to that. Of course, the reporter has

ome advantages over the printer, beause the wages of the exceptional men n the reportorial department are higher han the wages of the exceptional men n the printing department. Moreover, f the reporter wants to quit the newspaper business, which he usually does, he has better opportunities of getting out into something else, than has the So that in many ways, the opportunity is open to capable men as reporters-his opportunities are wider and better and finer than the opportunities open to any except the very extraordinary man as a printer. Nevertheless, take the ordinary journeyman reporter, that is, the average fellow that has been in the business long enough to learn it and who has sense enough to do the ordinary things in a workmanlike fashion, and that is what we regard as the ordinary journeyman reporter, his wages are not as high as the wages of the journeyman printer.

The consequences you are probably painfully familiar with, and I think that the business offices of newspapers also realize that, while it may be good business policy, aside from any other policy, to get printers just as good as you can get satisfactory ones, it is not business policy to get reporters as cheap as you can get them. You ought to extend the standard above the market price for reporters, and insist on having reporters that are better than the market. When you do that, the time will come that the reporter out on the firing line, the fellow that gets the facts, will have sense enough to understand it, and the present situation is that a great many of them do not-in the first place, because the position of reporter is so poorly paid that it does not attract or keep as good men as it ought to, and in the second place, that the men who do go into it, have intelligence and ambition and capacity, and the glamour of the profession is such that thousands and thousands of the very brightest and finest young men do, they either go out of it, or, if they stay in it, they graduate into better paid positions, and those better paid positions unfortunately are inside the office on the desk.

Now, the man inside the office on the desk, no matter how good he is, can not cure the errors of fact on the part of the reporter outside. He can correct certain routine errors, and in certain routine things the accuracy of the newspaper business is really marvelous. The city editors usually know everybody's initials, and he gets your initials right. whether the reporter gets them wrong or not, and as to certain very salient facts, the machinery for making them accurate is marvelous. There are certain routine things that are handled with remarkable accuracy - fires, for instance. I'don't mean that they always get the story of it right, but you go out when a house burns up and see it, and then read the account in the newspaper, and the account will be more comprehensive and more accurate than you can get. A lot of other routine things, for which the mechanical methods have been standardized, are done with remarkable accuracy. But, on the other hand, while the report of the fire usually tells all that is known, about how it started, gives the number of the house correctly, and the name of the proprietor correctly, and finds out whether there was any insurance, and gives the names the fire insurance companies on the loss, and then those things that ought to be done better than you could do it, on the other hand, did you ever see a report of an opinion of the Supreme Court from which you could tell what was decided? I never did, with the single exception of a few decisions of the Supreme Court of the United States that have been so enormously important that they were

sent out verbatim, and then they would not take any chances on the reporter's part, except to use judgment to know that this was the thing that ought to be sent out verbatim. Otherwise you will find that the decisions of the Supreme Court are reported from the sporting standpoint-you find out who wins the case. But by the time the case gets to the Supreme Court, that question is not of importance to anybody except the immediate litigants. The real question is what intellectual proposition was decided. And I never once saw a report of a decision of the Supreme Court from which anybody, no matter how good a lawyer, could glean that information.

That is merely an illustrating of the sort of reporting that ought to be done better. And that is partly the people's fault. The newspaper stands well on football and baseball games. A report of a football game or a baseball game is done so vividly that the lowest-browed reader can keep up his interest. It has all the low brow qualities of dramatic force, it goes clear to the low brow standard of news. But also it comes clear to the low brow standard, really more than news ought to. But also it comes up to the high brow standard. Every report of a football or baseball game will stand the tests of the experts, because the experts attend them and write of them. But no report will be given of this meeting of the League of California Municipalities that will stand the tests of the experts; there isn't any report of a Supreme Court decision that will stand the test of the expert; the reports of scientific and medical matters are grotesque. The only question is, whether they are comedy or tragedy. (Laughter.)

Now, the fact that you can get a good report of a prize fight, shows that the same thing can be done in regard to other matters, if they want to. Experts are sent to report the prize fight, and there ought to be experts sent to report the meeting of the Medical Association. And when lawyers demand as accurate reports of the Supreme Court decisions as the baseball fans demand and get of the baseball games, and when the newspapers care whether the lawyers are satisfied or not, then they will do it. I repeat, it can be done.

Of course, the newspapers don't care for one thing, because not one cares whether the faculty of Stanford University takes the paper or not, and there is no newspaper cares much whether all the lawvers and all the doctors take the newspaper or the other fellow's newspaper. It doesn't make any difference which paper you people takeyou are not numerous enough to make it make a difference. But it does make a lot of difference which paper the baseball fans take, because they are exceedingly numerous. If in some way the quality of circulation can be made important to newspapers, as to whether a given newspaper has the respect of the faculty of Stanford University, for instance, or not, then they will care, and then scientific news will be printed scientifically. It ought to be printed dramatically, too. The scientific way of presenting scientific facts won't go in the newspaper, and ought not to. The historian's way of presenting historical facts will not go in the newspaper. History is not news. What somebody found out last night is news to-day, but it would not be news to-morrow. Statistics are not news, and vet they can be made news. More intelligent reporting would not make it less dramatic. I think it ought to be dramatic, it ought to be made so the low brow can read it. But more intelligent reporting would not necessarily find the dramatic in long columns of figures. On the other hand, sometimes

columns of figures are sensational, be-

cause, if they are translated right, the books of your chambers of commerce and of your city auditors are full of exceedingly interesting news, if somebody had the sense to dig it out and the genius to dramatize it. So again you need intelligence and resourcefulness, not merely on the desk in the city-apparently you have it there-but out on the firing line-and often the main difficulty with a reporter is his ability to go out after and get news. intelligence on the part of that man would improve the newspaper a lot, would produce a lot of news that would be both readable and interesting. You take a fight, and that is always news because it doesn't take any brains on the part of the reporter to make a fight dramatic. It is dramatic. But a problem, a significant set of statistics may also be dramatic. But it takes intelligence to find that out and to present it.

Then of course the newspapers have a difficulty which they share with the politicians, and that is a joint contempt for the intelligence of people. (Laughter.) I think that is one of our most serious difficulties. Because if you treat the people as fools, you may succeed in fooling them-it has been done. And the newspaper editors mostly are convinced that the majority of the people are sub-normal and should be treated as such. So apparently are the politicians, and the army intelligence reports and the Stanford University intelligence tests, seem to carry it out-apparently it is true statistically. The majority of people never fully reach adult intelligence. That has statistically been demonstrated. And a very large fraction of them never reach the normal intelligence of a fairly young chap-that has been statistically demonstrated, and we may have some day to reorganize government to give proper place to that fact-I don't know. But my experience has been this,

that no matter if it is true that a lot of the people are sub-normal in intelligence. and most of them are sub-normal in caring, you can get more sense into the stupidest of them by talking sense than you can by talking nonsense. They get some of it. Moreover, there is no class of people composed entirely of stupid people. or that is dominated by stupid people, even if 51% of them are stupid-and I don't think the proportion is as large as that. That 51% does not dominate, nor does it represent the people. Just write and talk good sense to them, make it sensible, and the stupid ones will get something out of it, and the intelligent ones will get more out of it, and they will filter it to the rest.

I have said in print recently that I wished there was a law to make every politician read over the Lincoln-Douglas debates once a year. The Lincoln-Douglas debates were political campaign speeches, made to ordinary Illinois farmers, at the time when there were not very many schools, and when those farmers, on an average, could just about read and write. It was not a case of a high brow audience. And vet Lincoln and Douglas did their absolute intellectual best. They may have made it vivid, they may have used simple language, they may have used simple illustrations, but those debates are yet a classic of political discussion that can be used as sources of authority in the highest classes of the university.

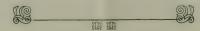
The same thing is true concerning that other great debate in the history of America, the debate that secured the adoption of the Constitution. The Federalist papers were campaign documents to get votes, and they were the sources of authority and knowledge. So that was true of two great political debates—the greatest men in the nation used all the brains they had in discussing difficult questions before common men,

they succeeded politically. A somewhat grotesque contract has perhaps been the equally great debate in importance, in recent years, on the League of Nations. Would anybody say that the senatorial debates on either side of the League of Nations discussions were based upon the assumption that the people were intelligent? I don't want to assume that the debaters were not intelligent, they may not have been as great as Lincoln and Douglas, they didn't have to be; but they were Senators of the United States, men selected for their intelligence, and most of them were intelligent, and if their debates were not intelligent it was not lack of intelligence on the part of the debater, it was what he thought was lack of intelligence on the part of his constituents.

So that from the top to the bottom of politics, the game of bunking the people by giving them reasons for your actions which would indicate that they are not intelligent and can not discover the reason you had for your action, goes on.

Now, I don't believe that the best reason you have in your own mind for reaching any conclusion is any too good to go to the people as the basis for that conclusion, and I believe that reason should be given, instead of trying to find talking points, to use the business man's jargon, to get by with the people. Well, but they tell us, politicians do that. They do. So do the newspapers. And they do it very badly. I remember one time a good many years ago I happened to be in San Francisco, and there was some one of the San Francisco newspapers asked me to write an emergency editorial to meet a certain crisis, because

they had nobody in the office that could quite do it. So I did the best I could. The editor said to me "Remember, you are dealing here with a great city full of little people, and you have got to talk to them in words of one syllable and in sentences of three words." That was his estimate of the intelligence of his own readers. And if you read his paper, you will find that he practises that theory in regard to the intelligence of his readers. I don't think it is necessary. I don't think either politicians or newspapers have to treat the people as if they were fools, even if some of them are. Talk to them all as if they had good sense, and in the long run you will get by with And if you don't do it, in the short run you will meet with perhaps success, perhaps not. Really I come back to the remark I made in the beginning, quoting from Dr. Wilbur on matters of public health; if you get back to the facts, if you get back to the truth, you will do better than by dealing with visions or abstract theories founded on nothing, or any other thing except the real thing, because the real thing is the only thing that survives. I have seen bluff work for a while. I never saw it keep on a very great while. I have seen greed succeed for a while; I never saw it keep on succeeding. I have seen demagogy and insincerity succeed for a while: I never saw it keep on succeeding. Nothing permanently succeeds but the sound truth. If you will put that into your own jobs, and if some divinity will inspire it into the newspapers, we will get along. If not, the best thing we can do is to struggle forward towards it, each of us doing his little part. 'Applause.)



Proceedings of the Twenty-Fourth Annual Convention of the League of California Municipalities

(Continued)

Palo Alto, Wednesday, Sept. 20, 1922.

The President: We are now going to take up the discussion of three constitutional amendments that have been proposed to the Constitution of California and that will be voted upon next November. The League of California Municipalities, or rather, the cities of the northern part of the State of California belonging to the League, had a meeting at Stockton a few months ago and discussed these three and took certain action concerning them at that time. We are going to discuss them, and I am going to call first upon the proponents of the proposed Electric Railway Franchise Amendment. Mr. Fred E. Reed, President of the California Real Estate Association, and Mr. Guv W. Wolfe, Director of Research of that organization, will present the affirmative side of the question. I have told them that they would have twenty minutes, and they have agreed to divide their time, twelve minutes to Mr. Reed and eight minutes to Mr. Wolfe. Mr. Milton

Bryan, Assistant City Attorney of Los Angeles, will speak on the other side.

I take great pleasure at this time in presenting to you Mr. Fred E. Reed, President of the California Real Estate Association.

ADDRESS OF MR. FRED E. REED, President of the California Real Estate

Association, for Initiative Measure No. 30.

Mr. Reed: Chairman Bartlett, Ladies and Gentlemen: I don't want to start out sailing under false colors. I am not President, I have been for the last two years up to a very recent moment.

During my administration of the office of President of that association, there were certain difficulties in the way of property ownership that came to our attention, and, in a spirit of service to the public, to whom we sell property, and with the desire to make property more saleable, a pure, unvarnished selfish reason, we undertook the investigation of the entire proposition.

N. CLARK & SONS

INCORPORATED 1889

Manufacturers of

ARCHITECTURAL TERRA COTTA, PRESSED BRICK
VITRIFIED AND TERRA COTTA PIPE
HOLLOW TILE FIRE PROOFING
FIRE BRICK TILE AND KINDRED CLAY PRODUCTS

WORKS.

Office: 112-116 Natoma St. WEST ALAMEDA SAN FRANCISCO

We put over a state license law, to take out of the profession the crooked people, and in the second place, got together the nine western states, the irrigation and reclamation program of which has resulted in Congress, acting under the spur of the western representatives, has undertaken the Colorado River project, and we intend to follow through the Iron Canyon project for the same henefits.

There was one other matter, however, which was very vital and which came to our attention, and that was the matter of transportation. And I want to say that this bill of ours is not an Electric Railway Transportation Bill in any sense of the word—it is a transportation bill. There are four kinds of transportation in California, every one necessary and vital, and every one entitled to its proper place. What we want is a coor-

dinated transportation system, which we haven't to-day.

Mr. Locke told me I was going to be against a hard proposition here, and told me I would find considerable opposition and find considerable difficulty, and he said I might even get the tar roasted out of me before I got through. I don't feel that way at all. and I think Mr. Locke must have been frightened before he got hurt. First of all, I know the men at the head of our state affairs are courteous men, and in the second place I know they want all the help they can get in solving municipal problems, and especially a problem as complicated as that of transportation, which is before you constantly, ladies and gentlemen-the question of how you are going to get street car lines to extend to the districts where it is necessary to have them extend, how you are going

LaFrance Hose Clamp

Perfect control over every fire line can be obtained with thichamp. Light, easy to carry in the belt. It can be instantly applied and water shut off at any point in the line. It eliminates shouting of orders to hydrant men several hundred freet away, and tracing crossing lines to their sources. Now being used successfully in many of the larrest fire departments.

Made by the world's largest manufacturer of fire apparatus.



American Afrance Fire Engine Company, Inc.

151 New Montgomery St., San Francisco, Cal

1302 Washington Bldg., Los Angeles

As Assessing Time Draws Near

Then you naturally think of

Assessment Lists Assessment Rolls Tax Bills

and we want you to also remember that A. Carlisle & Co. are doing the work for the majority of cities and towns for the coming year.



46 years of continuous service to municipalities is our guarantee.

That's good insurance.

A. CARLISLE & CO. SAN FRANCISCO

to get proper service rendered by bankrupt concerns that cannot render service, and how to get the fares down to the point where they ought to be, as low as possible.

I maintain that any man or any group that can come into your meeting and can tell you of a plan that will solve that problem sensibly and sincerely, you are going to hold as servants of the people, to the community of men of which you are the fathers. And some of your sons come to-day to confer with you on a problem in which we are interested and which concerns 1,300,000 property owners to whom we have sold three billion, eight hundred million dollars worth of property. And, as an organization of service, we feel it is our duty as well as our privilege to explain the method by which we hope to carry out a plan that will alleviate the present conditions in transportation matters.

In the first place, why are we concerned in transportation? For this reason, if you haven't transportation centering at a downtown district, you haven't value in your downtown district and you haven't, for instance, department stores. You have got to have your transportation lines, there, at the point of great convenience for your community, where your transportation lines center, and if your lines do not bring your people down, for any reason, or if they suspend, as you know they did in Des Moines a short time back for seven weeks, such scenes as that of a department store in Des Moines opening its doors to three people in the forenoon, were seen-that is a report of Mr. Albert E. Kern, the vice-president of our association, who brought that back after having viewed the situation in Des Moines-if any such situation occurs, the result is simply appalling.

Again, if you have a situation in your outlying districts that we have in



PARAGON Fire Hose

"Anything less than the best in fire hose is a losing investment."

United States Rubber Co.

EUREKA FIRE HOSE DEPARTMENT 1104 I. N. VAN NUYS BLDG. LOS ANGELES. CAL.

> 812 SEABOARD BLDG. SEATTLE, WASH.



FAIRCHILD-GILMORE
WILTON CO.

Paving Contractors

Rooms 500-504

Los Angeles Railway Building

Los Angeles

EDWARD GLASS

UNDERWOOD BLDG. SAN FRANCISCO

tockridge, a subdivision I put on welve years ago, one of the most eautiful imaginable, as Mr. Kellogg, ur landscape engineer, has agreed with ne many times. The property values, he taxable values there are less to-day yy twenty-five per cent than they were welve years ago, because we can't get he street car extension that we expected

But that isn't the worst of it. It sn't the value, it is not the thought that (can't sell real estate so that the people I have sold it to have lost money (I regret that) but it is the fact that we can't get people to build houses on that property where we put restrictions for ten years, and what happens after that? A hodge-podge of chicken houses and rabbit houses surrounding one of the most beautiful sections of our city, the place where I planned to build one of the finest subdivisions, to extend back into our hills clear to the Heights of Joaquin Miller Park

And it isn't only there, but it is out beyond Leona Heights, and in what we know as Glenwood—it is a pitiful condition. And why? Simply because the man cannot sell his property, the man who would be willing to build fine homes on that property, because they could not get there with street cars to the property, and if they have machines, their servants could not get there.

Statistics in Oakland for the last eight years show that ninety per cent of the homes built in Oakland were built within three blocks of a street car line, houses of all sizes, big and little. In other words, no sale without transportation. That's why the real estate men are interested in this transportation business, and that's why the downtown property seller is interested-my main business is downtown property, and I am interested in seeing my city grow, and seeing it grow, too, so that people will come to live in Oakland, and so that there will be more people to shop in the downtown district.

Somebody has said that we have sold out to some railroad transportation company. I want to say that not one dollar has been paid to me, or any one connected with our office, and we have all spent a large amount of time in this effort to save this situation of the California Municipalities in the matter of electric transportation. And I believe we have here hit on a plan, and it is a plan I can't find any fault with, and our eighty-six members, representing every city in California with five thousand population or over, and I think every city excepting two or three with four



thousand population or over, feel the same way about it. We came together and had a meeting in Los Angeles, and there was a unanimous vote that this amendment was the proper thing to put over. We did not do this hastily. We spent four months of research work upon it. Mr. Guy Wolfe is manager of that department of the association. We have built up a fund of over twentythree thousand dollars, and we are spending the money. Mr. Wolfe made this investigation for four months before we started. I said, "We can't afford to make a mistake in the administration that I have carried through of the State Real Estate Association, and that association is not going to go on the rocks on anything that is going to split us, or anything that is going to come back at us, boomerang fashion. We have had practically unanimous opinion on this matter, excepting for one particular person, who feels that it is all wrong, and that is Mr. Dan W. Carmichael, a man whom I love and esteem, one of the most splendid men in California-he differs with us.

All our railroad companies are bankrupt. They are bankrupt in spite of the poor character of service they are rendering to-day. They are bankrupt in spite of the fact that they are not required to make any extensions. They can't make any extensions, as they used to. They are bankrupt in spite of higher fares. You order them to give service to your public. We want them to give service to our property owners. Our buyers. They won't give service and they can't give service. We all know that contention is true. And the reason they can't give service, and the reason for higher fares, is that material costs and labor costs are higher. It is due to the competition of jitneys, which we can't do away with-I personally believe the jitney is here to stay, and it has its useful place; so I don't think we can relieve them there. But there is a direction in which we can furnish relief and our bill hits at that, and that is in the matter of the present burdensome franchise provisions. In the first place, we give them a franchise that expires in twenty-five years, let me say. It runs

Sacramento Capital National Bank Bldg. San Jose Bank of Italy Bldg.

Los Angeles Fay Building

WILLIAM DOLGE & CO.

Certified Public Accountants
Municipal Accounting

Audits, Examinations and Special Examinations. Accounting Procedures for Municipal Utilities. Budget Systems Installed

Telephone Sutter 697

369 Pine Street

San Francisco, Cal.

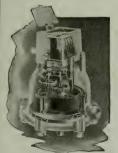
for fifteen years, and we give them another franchise for another period of years, and in ten years more we give them a third franchise, and then the railroad company goes out to sell its bonds. Mind you, it sells its bonds to build a railroad that you and I use. or the people that you and I are interested in use, but if the franchise provisions are so burdensome that the cost is excessive for getting the money to build the road, the fares have got to go up higher. Under the burdensome provisions, the railroad company will say, "We have to pay ten per cent for our money, and nobody wants to buy our bonds." That is expensive, it is wrong. What is the reason for it?

We propose an indeterminate franchise, a franchise that is not a perpetual franchise, as has been said, but a franchise that was instituted by Robert M. Lafollette, in Wisconsin, and Hiram Johnson in this state, which expires whenever the city wants to have it taken over by the city. We paved the way for municipal ownership. We do not say we advocate municipal ownership, or that we do not, but we certainly do pave the way for it.

It is perfectly apparent that the serial expiration is one cause of difficulty, and write-off is another. You have to write off four per cent a year above the cost, and that throws your whole plan out of balance. In an indeterminate franchise, you write off nothing. It will run along, and you pay what it is worth fairly, taking the time of building.

We offer the indeterminate franchise, too, because at the end of, say, a given three years period, or the beginning of the last three years, the system begins to break down, they do not make extensions, they do not make the fares, and we have not got transportation for a

EMPIRE WATER METERS



OSCILLATING PISTON TYPE 5/8" to 6"

Tested and proved by over thirty years of unsurpassed service.

Never equaled for sustained accuracy and low cost of maintenance.

The best water measuring device procurable anywhere at any price.

Send for illustrated descriptive catalogue.

NATIONAL METER COMPANY

251 CENTRAL AVENUE

SAN FRANCISCO 141 New Montgomery St.



sprayed from Gilmore trucks by 3 men in less than 7 hours!

The job was that of coating with asphaltum preservative from 1/4" to 3/8" thick a conduit for the city of Los Angeles near the intersection of Third and

Revolutionizes Conduit Coating!

The work was in charge of Thomas Brooks, Assistant Superintendent in the City Water Department.

He declares that it was completed in one-third the time usually required for applying the preservative with brushes, and that the coating was far more uniform and satisfactory.

Not only in the record breaking speed, but in the high quality of the work, this new method promises to revolutionize the coating of underground pipe and conduits. It furnishes another striking illustration of the flexibility and efficiency of Gilmore service.

Mr. Pipe Line Superintendent:

You will sace time and se by consulting Road Oil an

A. F. GILMORE CO.

Road Oils and Asphalt Binders

700 Van Nuys Bldg., Los Angeles

ong period while they are wondering vhether we are going to renew their ranchise or not. Our plan gives transportation continuously. It gives an ver-growing, active city all the chance. t gives it to the private corporation itility, to those who say, "We want nunicipal operation," but on Hiram Johnson's plan, the restricted plan, and f there is any trouble in turning this over the Railroad Commission, if they lo not do right, then what happens? Two things. One thing, we take it away from them, and operate it ourselves: two, when the Railroad Commission gives all the valuable franchises we can think up, the next Governor may say, "We will put a different Railroad Commission into power," and that Railroad Commission says, "For all your bonds, you get two per cent, three per cent, four per cent"-the right to regulate is exercised and it regulates the jitneys, it regulates the motor buses, it regulates all forms of transportation between cities.

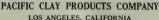
Another thing: If we have a uniform system all over California, the Railroad Commission at the present time, think of it, has been given all these powers, and, first, the road has got to be a necessary road, or it can't be built. That is for the protection of the public. In the second place, it has got to be capitalized at a fair rate-vou can't issue the stock that you used to, the water stock. That is fair to the public. In the third place, it has got to be a reasonable rate of interest and not too high. That, too, is for the benefit of the public. There are those three things, a certificate of honesty. You can't operate without permission of the Railroad Commission: you can't issue stock without the permission of the Railroad Commission: the rate of income is determined by the Railroad Commission. But the real. vital foundation of the structure lies in their right to examine into and say, "What kind of a thing is this? Is it built as cheaply as possible, to do the work?" Then to draw a parallel, I build a building, and I say to this gentleman down here, "I'll lease this building to you at six per cent." And he says "All right," and then I start in to put in a hundred and one things in that building, unnecessary things. He says, "I don't want it." That is an exact parallel. We have a building that is absolutely improperly constructed, and who pays the bill? It is the fellow that uses the car. And he is the fellow that should not have to pay any more bills than necessary.

In building up this road, there are

WE SOLICIT MUNICIPAL ORDERS FOR



VITRIFIED CLAY SEWER PIPE AND FERGUSON SEGMENT SEWER BLOCKS





LOS ANGELES, CALIFORNIA

FIRE HOSE

The GUTTA PERCHA & RUBBER MFG. CO.

only two things we can see that would be possibly objectionable to you gentlemen, and one is that you give up the right to control something that you now control in very small part, and I should think you would be glad to be relieved of the burden-as we, as representatives of property owners, please, gentlemen, give this up, so that the whole State of California, can function on a uniform basis, so that our securities in California will be looked at as sound and safe attractive securities to eastern money, that cheap money instead of expensive money, and why? Because the road is necessary, because the capitalization is right, because the interest paid is guaranteed, and because the foundation is sound and safe and secure to the people who put the money up-and who will get it back at some time.

Now, I have no interest in the railroads at all. I have an interest in property. I have an interest in property owners of the city, and they pay the taxes. When other values go to pieces your income-producing ability from which you run your city comes through & high tax rate, and that is something wu want to avoid. This is a matter for cooperation and team work all the way through, and I don't see one single person, or one single officer, or one single factor in our community's life, who receives anything but benefits from the plan which we here propose. And I hope that you will favor it.

Thank you.

President Bartlett: I will now introduce to you Mr. Guy W. Wolfe, who will have nine minutes.

ADDRESS OF MR. GUY W. WOLFE DIRECTOR OF RESEARCH of the

CALIFORNIA REAL ESTATE ASSO-

Mr. Wolfe: Mr. Chairman and Ladies and Gentlemen: I will try to cover in

PURE IRON FOR LONG SERVICE



Nails from the old Fairbanks House at Dedham. Mass. -in service 275 years. Analysis shows 39.8414 I'ure Iron-very low contents of Sulphr-Carbon, Copper and Manganese

The iron of the old nails, roofs and chains of Colonial days was surprisingly similar to the basic

ARMCO CORRUGATED CULVERTS

The record of service which these culverts have already achieved points to the familiar

> The Purer the Iron The Longer It Lasts

CALIFORNIA CORRUGATED CULVERT CO.

LOS ANGELES

ven or eight or nine minutes the matter at I consider the second most economic mendment on the November ballot, he first being the State Water and ower Act. I haven't the same amount confidence that the little boy had ho was seen by his mother to be rawing a picture, and she asked him f what he was drawing a picture, and e said he was drawing a picture of hod, and she said, "Yo one knows what had looks like." And he said, "Yes, nother, but they will when I get through with this picture."

I would like to refer for just one inute to the franchise situation. The tailroad Commission to-day, under owers that we believe have been wisely ranted by the people of California and by the Legislature, controls absortely the capitalization of all public tilities, so that they cannot borrow dollar and they cannot spend a dollar without the permission of the Railroad

Commission. It controls absolutely the rates and fares that are charged by all public utilities, including street railways and motor bus and truck lines, so that fares can neither be raised nor lowered without the control of the Railroad Commission. It controls absolutely, to the extent that no public utility can extend its lines one foot, can place a pole, can dig a hole in your street and lay a new main or line, or even repair and construct a grade crossing across a public highway or across a railroad inside the city confines in California, without first securing the permission of the California Railroad Commission. Further than that, we have granted to the Railroad Commission control over our public highways, to the extent that no railroad in California can construct a grade crossing across any highway in California without the permission of the Railroad Commission. and, conversely, the Highway Com-

PIPE TANKS CULVERTS

For PERMANENCY use STEEL For QUALITY buy "WESTERN"

We furnish Pipe from 1-16" to 1" thick in any diameter.

WESTERN makes STEEL TANKS for all purposes.

Designed, Fabricated, Erected anywhere on the Pacific Coast.

WESTERN CORRUGATED CULVERTS will give service heretofore unknown, as WESTERN CULVERT METAL is of unequaled rust-resisting, non-corrosive Quality. You will find nothing but "WESTERN" Culverts under the State Highways.

Let Us Figure Your Specifications

Western Pipe & Steel Co. of Cal.

444 Market Street SAN FRANCISCO 1758 N. Broadway LOS ANGELES

TAFT BAKERSFIELD

FRESNO

mission of California must have the approval of the Railroad Commission before constructing a grade crossing across a public carrier's right of way. In addition to that, a certificate of convenience and necessity is required, without which an extension cannot be made to a street car line. After the franchise granted by the City Council on the basis of that certificate of convenience and necessity has been passed, then the franchise comes up for approval to the Railroad Commission. So that to-day the only actual control vested in local authorities is the power to block the issuance of a franchise. And it is that one power that we contend, in addition to the other things that are wrong with franchises in California to-day, that has operated to prevent the extension of street car lines.

Mr. Reed did not have time to tell you that, in the most rapidly growing state in the Union, in the state that has

the most rapidly growing cities, in state whose natural resources are unbounded, we have not had a foot of new electric railway extension or continuation for years. The city of Oakland, with a population increasing over seventy-five thousand in 1912 to 175,000 to-day, is served by the same street car system that we had in 1912. My citin Berkeley, is served by the same street car facilities that we had in 1912. We can't grow. The city of Los Angeles was confronted at the very beginning of her very great development because the street car extensions were not being made, could not be made, and would not be made. Sacramento, San Iose. Fresno-every city in the state served by an electric car line-is in the same condition. That is why the California Real Estate Association has interested itself in franchises.

(To be continued)



TRIDENT METERS

Split Case Meters for Warm Climates C. I. Breakable Frost Bottoms for Cold Climates Hot Water and Oil Meters. Crest Meters for Large Flows Compound Meters for all streams, Large and Small

I TRIDENT DISC

Sold 158,000 in 1921

A record unsurpassed in the history of the Meter Business

MANUFACTURED BY

NEPTUNE METER CO.

NEW YORK

PORTLAND, SEATTLE, SPOKANE, SAN DIEGO

OS ANGELES OFFICE AND WAREHOUSE 701 East Third Street



TRIDENT CREST



Pacific Municipalities

AND COUNTIES

A Monthly Review of Municipal Problems and Civic Improvements

OFFICIAL ORGAN OF THE LEAGUE OF CALIFORNIA MUNICIPALITIES



CORONADO PUBLIC SCHOOL

LEADING ARTICLES IN THIS ISSUE

THE	REASON	FOR	MUNICIPAL	OWNERSHIP
Y	2 TD-1 T	D XXTCI		

85

PROPOSED NEW LEGISLATION WHICH WOULD AFFECT MUNICIPALITIES

RECENT COURT DECISIONS OF INTEREST TO MUNICIPALITIES

89

Two Dollars a Year Single Copy 25 Cents

Publication Office
Pacific Building, San Francisco, Cal.



Concrete Protects You at Grade Crossings

The gritty, non-skid surface of a Concrete road in all kinds of weather—wet or dry—gives you that control over your car which you need in emergencies.

This element of safety, in addition to the cleanliness, comfort, endurance and economy of Concrete roads, explains the rapid increase in Concrete road construction in recent years—and the big increase last year over any previous year.

Concrete makes the ideal road for the taxpayer as well as the motorist.

PORTLAND CEMENT ASSOCIATION

785 Market Street 548 South Spring Street SAN FRANCISCO, CALIF. LOS ANGELES, CALIF. A National Organization to Improve and Extend the Uses of Concrete

Offices in 22 Other Cities

Pacific Municipalities

AND COUNTIES

OFFICIAL	ORGAN	OF TH	E LE	AGUE	OF	CAL	IFOR	NIA	MUNICI	PALITIES
Entered as	second-class			22, 1913, he act of				at San	Francisco,	California,

VOL. XXXVII	TWENTY-SIXTH YEAR	No. 3
	H. A. MASON and WM.	

ADVERTISING RATES ON APPLICATION

Address all Communications to "PACIFIC MUNICIPALITIES," Pacific Building
San Francisco, California

MARCH, 1923

NOTICE—Every city belonging to the League of California Municipalities is entitled to a copy of this magazine for each of its officials without extra charge. If not received kindly notify the Secretary.

A. Carlisle & Co., Printers, San Francisco

CONTENTS	
PROGRAM FOR THE NEXT CONVENTION	83
COST OF PAVEMENT REPAIRS IN NEWARK, NEW JERSEY	84
THE REASON FOR MUNICIPAL OWNERSHIP	
By Delos F. Wilcox	85
PROPOSED NEW LEGISLATION WHICH WOULD AFFECT MUNICI-	
PALITIES	89
PROPORTIONAL REPRESENTATION ENFORCED	93
RECENT COURT DECISIONS OF INTEREST TO MUNICIPALITIES	94
PROPER LINING FOR CHIMNEYS AND FLUES FOUND ESSENTIAL	
By George Hyde Emery 1	02
CHEAPER AND BETTER HOUSES OBJECT OF COMMERCE DEPART-	
MENT REPORT	04
MUNICIPALLY OWNED HYDRO-ELECTRIC POWER FOR SACRA-	
MENTO AND ADIACENT TERRITORY	

CHISES

NEW METHOD OF APPLYING ASPHALTIC COATING TO WATER
PIPE DISCOVERED

DISCUSSION AT PALO ALTO OF THE PROPOSITION TO DEPRIVE CITIES OF THEIR CONTROL OVER STREET RAILWAY FRAN-

106

By H. C. Bottorff, City Manager, Sacramento

LEAGUE OF CALIFORNIA MUNICIPALITIES

Organized 1897 Affiliated with the Bureau of Municipal Reference, University of California

OFFICERS

President, FRANK C. MERRITT, Assistant City Clerk of Oakland First Vice-President, FRED C. WHEELER, City Councilman of Los Angeles Second Vice-President, NORMAN I. MALCOLM, City Autorney of Palo Alto Secretary-Treasurer, H. A. MASON, Bond and Ordinance Expert of the City of San Francisco Executive Secretary, WM. J. LOCKE

Headquarters: Pacific Building, San Francisco Official Printers: A. Carlisle & Co., San Francisco

INFORMATION BUREAU

The League of California Municipalities maintains in connection with the Secretary's Office, a Bureau for furnishing city and town officials with information on municipal affairs, and loaning copies of new ordinances and specifications. Officials are urged to make a free use of this Bureau. Kindly send a self-addressed stamped envelope in all cases.

Members of the California League of Municipalities

Orange

San Refeel

Jackson

Covina

Alamena	COVIDA	Jackson	Отапве	San Karaer
Albany	Corte Madera	Kennett	Orland	Santa Ana
Alhambra	Crescent City	King City	Oroville	Santa Barbara
Alturas	Culver City	Kingsburg	Oxnard	Santa Clara
Amador City	Daly City	Lakeport	Pacific Grove	
Anaheim	Davis Delano	Larkspur	Palo Alto	Santa Cruz
Angels	Dinuba	La Mesa	Pasadena	Santa Maria
Antioch	Dixon	La Verne	Paso Robles	Santa Monica
Arcadia	Dorris	La verne		Santa Paula
			Patterson	Santa Rosa
Arcata	Dunsmuir	Lindsay	Petaluma	Sausalito
Arroyo Grande	Eagle Rock	Livingston	Piedmont	Sawtelle
Auburn	East San Diego	Livermore	Pinole	Sebastopol
Avalon	El Cajon	Lodi	Pittsburg	Selma
Azusa	El Cerrito	Lompoc	Placerville	
Bakersfield	Elsinore	Long Beach	Pleasanton	Sierra Madre
Banning	El Segundo	Los Angeles	Plymouth	Sisson
Beaumont	Emeryville	Los Banos	Point Arena	Soledad
Belvedere	Etna	Los Gatos	Pomona	Sonoma
Benicia	Eureka	Loyalton	Porterville	Sonora
Berkeley	Exeter	Lynnwood	Potter Valley	South Pasadena
Beverly Hills	Fairfield	Madera	Red Bluff	South San Francisco
Biggs	Ferndale	Manhattan Beach		St. Helena
Bishop	Fillmore	Manteca Manteca	Redlands	Stockton
Blythe		Maricopa		Suisun
	Fort Bragg		Redondo Beach	Sutter Creek
Brawley	Fort Jones	Martinez	Redwood City	Sunnyvale
Brea	Fortuna	Marysville	Reedley	Susanville
Burbank	Fowler	Mayfield	Rialto	Taft
Burlingame	Fresno	Merced	Richmond	Tehachapi
Calexico	Fullerton	Mill Valley	Rio Vista	
Calipatria	Gilroy	Modesto	Riverside	Tracy
Calistoga	Glendale	Monrovia	Roseville	Tulare
Carmel-by-the-Sea	Glendora	Montague	Ross	Turlock
Chico	Gridley	Montebello	Sacramento	Ukiah
Chino	Gustine	Monterey	Salinas	Upland
Chowchilla	Hanford	Monterey Park	Sanger	Vacaville
Chula Vista	Hayward	Morgan Hill	San Anselmo	Vallejo
Claremont	Healdsburg	Mountain View	San Bernardino	Ventura
Clovis	Hemet.	Napa	San Bruno	Venice
Coalinga	Hercules	National City	San Diego	Visalia
Colfax	Hermosa Beach	Needles	San Fernando	Walnut Creek
Colton	Hollister	Nevada City	San Francisco	Watsonville
Colusa	Holtville	Newman	San Gabriel	Watts
Concord	Honolulu	Newport Beach	San Gabriei San Juan	Wheatland
Corcoran	Huntington Beach	Ooledele		Whittier
Corning	Huntington Park	Oakland	San Jose	Willits Willows
			San Leandro	
Coronado	Hyde Park	Oceanside	San Luis Obispo	
Compton	Imperial	Ojai	San Marino	Yreka Yuba City
Corona	Inglewood	Ontario	San Mateo	Total 244
	A 1 / 35	1 0 1.		

Associate Members-Oregon: Astoria, La Grande

Pacific Municipalities

AND COUNTIES

OFFICIAL ORGAN OF THE LEAGUE OF CALIFORNIA MUNICIPALITIES Entered as second-class matter March 22, 1913, at the Post Office at San Francisco, California, under the Act of March 3, 1879.

Program For the Next Convention

In order to prepare an attractive program for the convention to be held at Coronado next September, ballots containing a list of subjects were sent to city officials throughout the state requesting them to mark their first, second and third choices. After their return to League headquarters the ballots were tallied, the first choice votes being counted as one, the second choice as two-thirds of a vote and the third choice as one-third of a vote.

The result is as follows:

16

- 172/3 PAVEMENTS—grading, materials, cleaning, repairing.
 - SEWER SYSTEMS—materials, cleaning, disposal methods,
- 142/3 GARBAGE-segregation, collection, disposal.
- 27 ZONING—classifying districts, changing.
 - PURCHASING AGENTS-powers and duties. 22/2
 - $4\frac{1}{3}$ PUBLIC OFFICIALS AND THE PRESS—commendation, condemnation.
- $16\frac{2}{3}$ BUSINESS LICENSES—desirability of, limitations.
- $7\frac{1}{3}$ BUDGET SYSTEMS-provisions of.
- BUILDING CODES—fire limits, removing dilapidated buildings.
- BILLBOARD REGULATION -prohibition, regulation. 12/3
- 101/2 STREET LIGHTING—most efficient methods, standards,
- PARKS AND PLAYGROUNDS—apparatus, fencing, swimming pools,
 - STREET ORNAMENTATION—parking spaces, trees, street signs.
- 41/2 FIRE PROTECTION—alarm systems, apparatus,
- $2^{2/3}$ SOCIAL SERVICE—health centers, relief to needy, etc.
- 11/3 MUNICIPAL MARKETS—limitations and management.
- 82/3 TRAFFIC PROBLEMS-street cars, busses, automobiles, PUBLIC SPIRIT—how to arouse, civic organizations.
- $4\frac{2}{3}$
- PENSION SYSTEMS—scientific tables, rights of pensioners.
- LIABILITY INSURANCE-state of municipal.

It is apparent that "zoning" is by far the most interesting question before city officials at the present time. Following zoning, we have pavements, business licenses, sewer systems, building codes and garbage disposal, their preference being in the order mentioned.

It is proposed in a general way, to arrange the program so that the amount of time to be given each subject will be in proportion to the preferences expressed in the foregoing vote.

By the adoption of this plan we may say that the city officials throughout the state have participated in preparing the program, at least to the extent of selecting the subjects for discussion and fixing the amount of time to be devoted to each subject.

Cost of Pavement Repairs in Newark, N. J.

Newark, New Jersey, is a manufacturing city of 500,000 population. It has heavy traffic of motor vehicles not only within it but connecting it with New York, Philadelphia, etc.

The streets are well paved and kept in good repair. The cost of repaving or maintaining each kind of pavement is analyzed and tabulated so as to eventually determine what kinds of pavements are most economical.

The Annual Report for 1921 of the Director of Public Improvements shows the cost of repairs per square yard of pavement bases and of surface layers separately and added together.

The total paved streets on December 31, 1921, was 282 miles. The principal kinds of pavements are shown in the table below.

The city has an excellent municipal asphalt pavement plant equipped with storage bins, conveyors, steam rollers and street tools. This plant cost \$76,355, not including the land. This plant repairs all old asphalt pavements and lays some new ones on new locations. The cost of repairs made by the city plant in 1921 to the pavements which have passed the five year guaranteed periods of the original contractors is shown in the following table:

Cost of 1921 Pavement Repairs by Newark, N. J. City Asphalt (etc.) Plant

	F	- 3	, 3 3		,
	Surface Layer		Concre		
Kind of		Per		Per	Total
Pavement	Sq. Yds.	Sq. Yd.	Sq.Yds.	Sq. Yd.	Both*
Sheet Asphalt	51,499	\$1.8126	3,979	\$2.3313	\$4.1439
Granite Block	27,815	1.5262	1,131	2.6651	4.1913
Brick	. 6,679	3.4968	3,236	4.1820	7.6788
Asphalt Block	. 126	4.2169	59	2.9908	7.2077
Wood Block	. 4,168	4.4164	3,487	1.5341 (v)	5.9505

*Total Both—means where surface and base were repaired at same locations.

(v)—Repairs to base of wood block pavement consisted of replacing injured one-inch mortar cushion with another on the existing good six or eight-inch concrete base below.

J. W. Howard, C. E., 234 Mt. Prospect Ave., Newark, N. J.

The twenty-fifth Annual Convention of the League of California Municipalities will be held at Coronado, September 10th-14th, 1923.

Start making your arrangements to attend NOW

THE REASON FOR MUNICIPAL OWNERSHIP

By DELOS F. WILCOX

(From an Address before the City Managers' Association at its Eighth Annual Convention at Kansas City, Missouri, November 16, 1922.)

Financial Conservatism Necessary

I am for Municipal Ownership because I see the necessity for reasonable conservatism in the financing and development of public utilities.

Money invested in public utilities is devoted to public service. The stocks and bonds issued by public service corporations for transit development, lighting, power and telephone facilities are in law and in equity a quasi-public obligation. Now, it is a fact that the capitalization of these principal utilities in private ownership is at this very moment at least four or five times as great as all the debts of all the cities for all public purposes, including municipal water supply. When we talk of the burdens of debt borne by a given city we should look beyond the city comptroller's report. He gives us only a small part of it. He omits the traction company, and the electric company, and the gas company, and the telephone company, and holding companies in New York, Philadelphia, Boston and Chicago, that stand back of them and control them and determine their policies and fix their rates for the support of another pyramid of capitalization invisible to the near-sighted eyes of public regulation. From the beginning the policy of private ownership has been to make two or three or four dollars of debt grow where one was planted. moters went into the public utility game not to render service, but to get rich by the capitalization of hopes and the exploitation of community needs. Did you ever hear of a privately owned utility paying off its debts or shrinking its capitalization except reluctantly and under the compulsion of bankruptcy? And if perchance, a bond is paid, its retirement does not inure to the benefit of the public, but only adds to the value of the stockholders' property.

Capital Burdens Constantly Increased

It is the theory of private ownership that the burden of the public on account of the cost of capital should never grow less, but on the contrary should be increased at every possible opportunity. If a franchise was profitable, it was immediately capitalized against the public who gave it. If it was unprofitable, the losses incurred were piled up as equity claims to be added to the investment. I remember very well how the Metropolitan Street Railway Company here in Kansas City walked up eight years ago and said: "Here is our franchise. We cannot live under it. It is bankrupting us. Give us a new one that will recognize and protect the value of our property, including \$3,000,000 for this precious franchise that we are trying to get rid of." And the people of Kansas City, urged on by every interest opposed to Municipal Ownership, were geese enough to fall for that kind of a bargain.

I am opposed to private ownership because it has proven itself incapable of honest and conservative financing. It denies depreciation upon its investments. It claims that the mules of 1888 are pulling the electric cars of 1922: that the cables are still working: that the old car barns and power houses discarded twenty years ago are still rendering public service. It claims the unearned increment in land upon which the consumers have paid interest and taxes ever since it was devoted to public service. It claims inflated values based upon the calamity of war. It claims what it gave away and what was given to it. It uses only addition and multiplication. Subtraction and division are anathema to it.

The Drive for Capital Profits

The drive for capital profits under private ownership has been and is universal and resistless. Public utilities as servants of urban civilization are nothing unless they are cheap. best the burden of capital cost is a tremendous one. New York City is now paying \$8,500,000 a year out of taxes to subsidize cheap transportation. On the subways, with the cars jammed to the doors, capital charges at 6 per cent on the necessary cost of construction and equipment eat up practically 50 per cent of gross earnings. And now the Interborough claims as the value of its investment everything that it put in and everything that the city put in, too; and claims that it is entitled to earn 8 per cent on this inflated sum.

The Contrast of Municipal Ownership

In contrast with the universal policy of inflation pursued by private ownership, the policy of Municipal Ownership is a paragon of soundness and sanity. Glasgow, the pioneer in municipal ownership of street railways, paid off its entire tramway debt out of earnings in less than 25 years, while at the same time the financial freebooters in control of the

traction lines of America were doing all in their power to wreck the street railway industry, taking the expected economies of electrification as the occasion for doing it. When American cities issue bonds for public utilities or for other purroses, they have to make provision for paving them when due. Refunding is the rare exception. San Francisco, during the first seven years of municipal ownership of a growing street car system, accumulated depreciation reserve equivalent to \$15,000 per mile of single track in service at the end of that time. Seattle. in taking over the street railway system. undertook to pay for it in 20 years. Detroit is scheduled to pay off the purchase price of the Detroit United Railway lines and the cost of new lines within 30 years. Even New York will pay for the subways and its Catskill water supply in 50 years.

In finance, which is a matter of controlling importance in the development of public utilities, Municipal Ownership means a sound policy; while private ownership means reckless financing and ultimate disaster both to honest investors and to the rate paying public. I know of no way in which this speculative financial policy can be completely eradicated from public utilities and the reverse policy effectively adopted, under private ownership.

Public Regulation Has Failed

I am ter Municipal Ownership because public regulation has been tried and has failed. The experiment has been going on for fifteen years. In spots and at times, regulation has given promise of a certain degree of success. The regulatory movement has failed politically, financially and from the point of view of service. At first the utility companies were dead against regulation. When they saw that it was inevitable, they undertook to control it. They helped write the laws; they helped select the commissioners; they got their own men in on the commission staffs; they cultivated the commissioners socially and kowtowed to them officially; and most effective of all, they took care of the lame ducks among them.

Not Accepted In Good Faith

The utilities of the country have never, with rare exceptions, accepted regulation in good faith. They have made every effort to thwart it, to divert it from its purposes, and to transform it into an agency for the furtherance of their own selfish ends. The regulatory movement is up to its neck in politics: commissions are overthrown and reconstituted with changes in party control of the State government: and frequently furnish the most burning issue in state campaigns. The utilities favored state control with the plea that control should be taken out of politics, which meant that the regulatory bodies should be far removed from the consumers who grant the franchises and pay the bills, and close to the financial powers that control the companies and reap the financial rewards. The plan did not work, and the commissions almost everywhere are in politics. Unfortunately it is not responsible politics, but the politics where passions are aroused without anybody being able to vote directly on the issue, or make himself count for a constructive policy.

Finances Not Made Sound

Regulation has failed because it has not succeeded in introducing soundness into public utility finance. The free distribution of the stock of operating companies has been checked, but the manipulators have merely retired from the second story to the attic, and have continued to flood the count with unregulated public utility securiti through the medium of holding cor panies. Even with respect to the opera ing companies, the commissions ha not been able to effect a correction past blunders in finance except partial in a few instances. In most cases t old stocks and bonds and contract still hang like lumps of lead tied to t ankles of the companies as they try make the grade in these troubled time The commissions have succeeded some extent in paralyzing the financ initiative of the companies, by the incomplete restrictions affecting the f ture but not curing the past. T commissions have raised the rate return, usually upon excessive valu tions, and have thus deprived t public of any other recourse. Federal courts are company tribunais to which appeal can be made from the commissions for the protection of property rights. If the commissions make the rates too low, the Federal courts bowl them over; if they make the rates too high the Federal courts are not interested. They have no jurisdiction to reduce rates for the benefit of the public.

The failures of the commissions with respect to service may not be quite as general as in other respects, but in New York City, with 15 years of regulation in the background, the State Transit Commission a few months ago proved by its own engineer at a public hearing that the effort to control the service on the transit lines during this period had been one long succession of futilities.

The failures of State regulation have been due in part to special conditions, but in the main they are inherent in the very theory of regulation, which is an attempt to force private companies to act as if they were nor private companies. Theoretically and practically,

it is and always must be more difficult to get public service through private agencies whose controlling motive necessarily is profit, than directly through public agencies responsible to those who receive the service.

Regulation has had a partial sucess in bringing about publicity of utility accounts, but here also the expenditures which would not look well in an accountant's report have been transferred to the books of the holding companies, and the public has been told to mind its own business when it manifested any curiosity about them.

Regulation has done one thing most effectively. It has paralyzed municipal control, destroyed franchise contracts, and reduced the cities to a condition of helpless rage or deadly indifference.

Public Functions by Public Agencies

I am for Municipal Ownership because I believe in government, not in anarchy. I believe that public functions should be performed by public agencies. I regard political action in the broad sense of the term as the highest category of human activity. Public utility services stand out as a supreme obligation of the organized community to its individual members. Municipal Ownership offers democracy its best opportunity to educate itself in co-operation and develop intelligence and responsibility in its citizenship. In the great cities, comparatively few families can own their own homes. The development of a great body of common wealth devoted to common service is the only possible alternative to the development of a large propertyless class, unattached and irresponsiblethe proletariat that is one of the prime dangers of every great city. Without a better balance between public and private interests than we now have in this country, the overload of individualism is bound to destroy us in the

The Call For Leadership

What American cities need is vigorous, sane, progressive community leadership. Municipal Ownership opens the way for the development of publicmindedness and for honorable and interesting public careers. What cities need is to render more services where every citizen is impelled by his individual interest and understanding to hold public agents responsible for good service. In the past, and to a great extent even today, the prestige and financial and political power of the utilities have been and are pitted against honest and efficient municipal government. It has been and is to the interest of these utilities to have a corrupt, reactionary, weak or ignorant city government. The development of independence, efficiency and power at the city hall is dangerous to their selfish aims

The Futilities of Rate Cases

I am for Municipal Ownership because that seems to be the only way of escape from the corrupting futilities of rate cases. The utilities of the country have an annual income of about three billion dollars. This revenue almost collects itself. Day by day and mothh by month the cash flows in from the millions of street car riders, and gas consumers, and electric light and power users, and telephone subscribers. This flood of money is two or three times the amount of all the municipal taxes collected by the cities everywhere. No matter how hard up these companies may be, they always have enough ready cash to hire engineers and accountants. and lawyers, and economists and publicity men to think the way they want them to think. One of the most terrible things in American public life today

(Continued on page 118)

PROPOSED NEW LEGISLATION WHICH WOULD AFFECT MUNICIPALITIES

The following bills of interest to municipalities are now pending in the Legislature:

Senate Bill No. 13. (Senator Hurley). A proposition to permit public officials to contract with or purchase materials and supplies from California manufacturers or dealers and give them a preference over outside bidders, providing such preference does not exceed five per cent of the price.

Senate Bill No. 14. (Senator Godsil). A bill to make the City and County of San Francisco liable to pay for street improvement liens in the case of defective

proceedings.

Senate Bill No. 33. (Senator Allen). A provision to add a new section to the Code of Civil Procedure to be numbered 349½ and provide that the validity of any proceedings for the annexation of territory to a municipal corporation shall not be contested unless an action is brought within three months after the completion of the proceedings.

Senate Bill No. 49. (Senator Sharkey). An act to enable cities to sell or

lease their water works to municipal water districts.

Senate Bill No. 76. (Senator Lyon). An act to amend Sections 2, 3, 756 and 856 of the Municipal Corporation Act, as follows:

Sec. 2 of said act is proposed to be amended so as to provide that the Board of Supervisors, in proceedings to organize a community into a municipal corporation, may exclude ranch property which has not been divided into city lots.

Sec. 3 is proposed to be amended so as to provide that, in proceedings for incorporating a community into a municipality, the election laws governing sixth

class cities shall apply.

Sec. 756 is proposed to be amended so as to provide that elections in fifth class cities shall harmonize with the general law provided expressly for cities of the fifth and sixth class.

Sec. 856 is proposed to be amended so as to harmonize with the general election law provided for elections in fifth and sixth class cities.

Senate Bill No. 77. (Senator Lyon). This measure is a proposed act to authorize counties to improve, or assist financially in improving streets lying within municipalities.

Senate Bill No. 81. (Senator Hurley). An act to authorize and provide for the formation of municipal harbor districts by cities and cities and counties

for the purpose of improving, and maintaining harbors.

Senate Bill No. 95. (Senator Ingram). An act to amend section two of the Municipal Corporation Act so as to provide that when proceedings are taken for organizing a community into a municipal corporation the owner of any tracts of land within the proposed boundaries exceeding ten acres in the aggregate, which is either uninhabited or devoted exclusively to farming or agriculture, may object to having his lands included within the proposed municipalities, and the Board of Supervisors will be empowered to exclude such lands from the proposed municipal corporation.

Nenate Bill No. 99. (Senator Lyon). An act to amend Section 1 of the act of April 10, 1911, relating to the levy of a tax for park, music and advertising purposes, by raising the limit of taxation for such purposes from 15 to 25 cents.

Sonate Bill No. 115. (Senator Breed). A new motor vehicle act similar in a general way to the present motor vehicle act but containing important re-

strictions on motor trucks and their speed limit.

of the Municipal Corporation Act by adding in sub-division eleven thereof, relating to the powers of a sixth class city, the words "and improved public mooring places for water craft"; also amending sub-division thirteen of said section so as to authorize a city of the sixth class to operate bus lines in addition to other means of transportation.

Senate Bill No. 308. (Senator Swing). An act to validate municipal bonds. Senate Bill No. 309. (Senator Swing). An act to validate proceedings for appreciation.

Senate Bill No. 404. (Senator Hurley.) An act relating to the paving and repair of highways within municipalities which form part of the state or county highway system, and requiring the state or county officials, as the case may be, to pave and repair such highways whenever they constitute part of such a system and the funds therefor have been raised by a bond issue or special tax.

Nenate Bill No. 429. (Senator Boggs). An act to amend the act of April 26, 111, amended May 18, 1919, by adding a new section which would authorize the legislative body of any district, city, city and county, county, or state to purchase or secure for any officer of such political subdivision, insurance protecting and indemnifying such officer against liability for damage or injury to property, and pay the premium out of the public funds.

Senate Bill No. 435. (Senator Eden). An act to amend Section 4 of the act of 1919 authorizing sanitary districts or municipal corporations to enter into a joint agreement for the construction of sewers, water mains, or other conduits in public streets, including the construction and maintenance of outfall sewers.

Senate Bill No. 462. (Senator F. J. Gates). An act to amend Section 862 of the Municipal Corporation Act governing sixth class cities by empowering the

board of trustees to construct tunnels.

Assembly Bill No. 113. (Reindollar). An act to amend Sections 8 and 17 of the Sanitary District Act of 1919 by eliminating a conflicting provision in Section 8 relative to the bond debt limit and another provision in Section 17 which gives the right to the assessor to exempt certain property from taxation.

Assembly Bill No. 115. (Reindollar). An act to enable municipal corpora-

tions to sell or lease their water works to municipal water districts.

Assembly Bill No. 116. (Reindollar). An act to validate sanitary district bonds.

Assembly Bill No. 131. (Pomeroy). An act to amend Sections 851, 855, 882, 883 and 884 of the Municipal Corporation Act, so as to change the name of the recorder of sixth class cities to "police judge."

Assembly Bill No. 192. (Pomeroy). An act to authorize the establishmeth of inter-city planning districts.

Assembly Bill No. 221. (Jones). An act to amend Section 863 of the Munici-

pal Corporation Act so as to authorize sixth class cities to codify their ordinances and post such a code instead of publishing the same.

Assembly Bill No. 222. (Mueller). An act to amend Section 35 of the Motor Vehicle Act so as to provide that all fines for violations occurring within a city following an arrest by an officer not employed by the city shall go to the county, whereas all other fines shall be paid to the treasurer of the city or county in which the court is held, as the case may be.

Assembly Bill No. 243. (Rock). An act to add a new section to the Civil Code to be numbered 1716 and provide that the city and county of San Francisco shall be liable for street work liens in case of erroneous proceedings.

Assembly Bill No. 275. (Donohue). An act to amend Section 862 of the Municipal Corporation Act so as to authorize sixth class cities to operate bus lines and to acquire and improve public mooring places for water craft.

Assembly Bill No. 289. (Spence). Amending the election law for fifth and sixth class cities by requiring: 1st, that nomination papers shall specify full term or short term, as the case may be; 2nd, that voting precincts shall consist of a consolidation of any two or more of the precincts established by the county; 3rd, that the election officers shall consist of one inspector, one judge and two clerks; 4th, that it shall not be necessary to send out polling place cards; 5th, that the spaces on the ballots shall be three-eighths of an inch apart and the column three inches wide instead of four inches; and 6th, that spoiled ballots may be cancelled by an indelible pencil as well as ink, the same as now provided by general law for state and county elections.

Assembly Bill No. 321. (Stevenot). An act amending Section 2 of the act providing for the organization of municipal corporations by providing that the owner of any tracts of land within the boundaries of a proposed municipality exceeding ten acres in the aggregate, and which is either uninhabited or devoted exclusively to farming or agriculture, may be excluded from the proposed municipality by the Board of Supervisors.

Assembly Bill No. 360. (Cleveland). An act amending Section 4387 of the Political Code by providing that when a taxpayer files with the city treasurer an objection to the payment of any claim allowed by the city and institutes injunction proceedings against such payment, the court will allow him \$100.00 as costs and attorney's fees in case he is sustained.

Assembly Bill No. 382. (Bromley). An act to amend Section 10 of the Annexation Act of 1913 so as to provide that the expenses of annexation proceedings shall be paid by the city attempting the annexation.

Assembly Bill No. 386. (Lyons). An act to amend Section 8 of the Street Improvement Act of 1903 relating to the trial of actions for ascertaining the compensation to be paid for property taken.

Assembly Bill No. 397. (Pomeroy). An act to authorize the Street Opening Act of 1903 to be used by counties.

Assembly Bill No. 416. (Reindollar). An act repealing Section 28 of the Sanitary District Act of 1919, which permits the calling of bonds.

Assembly Bill No. 422. (Clarke). An act amending Section 1 of the Municipal Improvement District Act of 1915 by providing that bonds of said district may be issued for the acquisition of land to be used in connection with any proposed public improvement.

Assembly Bill No. 476. (Baker). An act to amend Section 7 of the act of

April 11, 1911, which provides for the issuance of improvement bonds to represent special assessments, by providing that any excess in the sale of bonds may be paid into a reserve fund instead of the general fund and that any bonds remaining unsold after the first advertisement for bonds may be sold thereafter for not less than par.

Amark's Ball Va. 179. (Lyons). An act to validate municipal bonds.

I makes Bill No. 180. (Lyons). An act to validate municipal improvement ones.

As embly Bill No. 501. (Dean). An act to provide for the erection and maintenance of public comfort stations in cities and counties.

According Ball No. 510. (Mitchell: An act to amend Section 2656 of the Political Code relating to the refunding of road district money in cases where municipal corporations are organized by adding more detailed provisions.

Learnity Bill No. 529. Lyman. An act to prohibit any city or county from imposing a brense tax against any person, firm or corporation for more than \$5.00 a year.

Assembly Bill No. 649. (Dozier). An act to amend Section 862 of the Mumicipal Corporation Act governing sixth class cities by amending sub-division 10 thereof so as to provide that sixth class cities might impose license taxes only in the exercise of their police powers and not otherwise.

Assembly Bill No. 816. (Finme). An amendment to Sections 6 and 9 of the Street Opening Act of 1903 relative to the limitation of time for bringing an action to contest the validity of proceedings.

Assembly Bill No. 822. (Fmme). An act to validate municipal bonds.

Assembly Bill No. 824. (Finne). An act to validate municipal improvement district bonds.

Assembly Bill No. 832. (Weller). An act to empower one municipal corporation to construct and operate utilities of various kinds across and along the streets of other municipal corporations.

Assembly Bill No. 892. (Crittenden). An act to amend the act of March 2, 1891 relating to the power of municipalities to have their assessing and tax collecting done by counties by providing that they may retain the power of assessing and have the county do the tax collecting only.

Assembly Bill No. 915. (Reindollar). An act to provide for the removal of weeds within municipalities.

Assembly Bill No. 924. (Whitacre). An act to amend Section 15 of the local improvement act of 1901 by limiting the right of redeeming property to one year instead of five years as at present.

Assembly Bill No. 965. (Lyman). An act to amend nearly all the sections of the Motor Vehicle Act.

Assembly Bill No. 1040. (Morris). Another act to amend nearly all the sections of the Motor Vehicle Act.

Assembly Ball No. 1074. (Spence). An act to amend Sections 2 and 15 of the Municipal Unitary District Act of 1921 by making more express provision for the organization of such a district where it is designed to embrace but one municipality and unincorporated territory; also making express provisions relative to the issuance of bonds.

Assembly Bill No. 1117. (Roberts). An act to repeal the act authorizing municipalities to provide a procedure for establishing set-back lines.

PROPOSED AMENDMENTS TO THE STREET IMPROVEMENTS LAWS

Senate Bill No. 149. (Lyon). An act to amend Sections 2, 3, 4, 9, 11, 13, 16 and 17 of the Improvement Act of 1911.

Senate Bill No. 159. (Lyon). An act to amend Sections 11 and 1214 of the Vrooman Act of 1885.

Senate Bill No. 211. (Swing). An act to amend Sections 21, 23, 24, 25, 26, 27 and 28 of the Improvement Act of 1911.

Senate Bill No. 306. (Swing). An act to amend Sections 60, 61, 62, 63, 66, 7, 68, 70 and 72 of the Improvement Act of 1911

67, 68, 70 and 72 of the Improvement Act of 1911.

Senate Bill No. 494. (Hurley). An act to amend Section 11 of the Improve-

ment Bond Act of 1915.

Senate Bill No. 655. (E. J. Gates). An act to amend Section 2 of the Im-

provement Act of 1911.

Assembly Bill No. 34. (Eksward). An act to amend Sections 3, 4, 5, 9,

12, 13, 14, 15 and 17 of the Improvement Bond Act of 1915.

Assembly Bill No. 318. (Weller). An act to amend Section 2 of the 1911

Act

Assembly Bill No. 347. (Reindollar). An act to add four new sections to the Civil Code so as to provide that no street assessment shall be valid unless the lien is recorded with the county recorder within thirty days.

Assembly Bill No. 589. (Dawson). An act to add a new section to be known as Section 6a of the Vrooman Act of 1885 by providing that municipalities may do their own street work instead of awarding a contract therefor.

Assembly Bill No. 640. (Weller). An act to amend Sections 1, 2, 4 and 36 of the Improvement Act of 1911.

Assembly Bill No. 1151. (Badham). An act to amend Sections 29 and 30 to the Change of Grade Act of 1913.

PROPORTIONAL REPRESENTATION INDORSED

Whereas; the Courts have decided that the State Constitution (unless amended) will not permit the election of a municipal legislative body by the system known as Proportional Representation,

And whereas; the experience of the City of Sacramento in the election of a representative council by this method has been highly satisfactory,

And whereas; we believe the intent of the State Constitution is to accord the fullest measure of Home Rule to incorporated cities;

Be it hereby resolved; that it is the sense of the Sacramento Chamber of Commerce that a Constitutional Amendment should be passed permitting chartered cities to elect their legislative bodies by Proportional Representation, if they so desire.

Unanimously adopted, January 24, 1923.

RECENT COURT DECISIONS OF INTEREST TO MUNICIPALITIES

CHARTERS

(1) WORDS AND PIRASIS "MANNER" OF DOING A THING-INCLUSION OF FIRMLY OF TYPE. INCLUSION. Whether the word "manner" shall be construed as including not only the way or mode of doing a thing, but also the time of doing it, depends upon the intention of the lawmakers, to be gathered from the context; that is, the "manner" of doing a thing and the "time" of doing it are distinct things, and ordinarily the word "manner" will not be construed as including the element of "time" unless it shall appear from the context that the law-makers intended that it should.

Moore v. The City Council, City of Los Angeles, 38 Cal. App. Dec. 644.

(2) CHARTERS—AMENDMENTS MANNER OF ADVERTISING—ELEMENT OF THE NON-INCLUDED IN WORD "MANNER"—INTENTION OF LEGISLATURE.—It was not intended that the element of time should be included in the word "Manner", as that word is used in the constitutional requirement (section 8 of article XI of the Constitution) that proposed amendments to a charter shall be advertised "in the same manner" that is provided for the advertisement of a proposed charter.

Id.

CRIMINAL LAW

(1) POLICI COURTS—CITY OF SACRAMENTO—AMENDMENT OF MINUTES— JURISDICTION.—The police court of the city of Sacramento has authority to amend its minutes to conform to the sentence actually pronounced in a criminal proceeding, whether considered as a court of record or not.

In re Tung Fong, 39 Cal. App. Dec. 343.

- (2) In.—IMPOSITION OF CLARLETIVE SENTENCES—POWER OF POLICE COLLEY SECTION 669, PENAL CODE. Whether applicable to proceedings in police courts or not, there is nothing in section 669 of the Penal Code which would deprive such courts of power to impose cumulative sentences within the limitations of that section. If it does not apply to such court, then it does not curtail the powers exercised by them prior to its enactment, while it it does so apply, then it merely limits the jurisdiction of such courts to impose cumulative sentences to the cases therein mentioned, just as it does that of superior courts.
- (3) ID. NATURE OF OFFENSES. CUMULATIVE SENTENCES.—The power to impose cumulative sentences is given generally, without regard to the nature of the offenses of which a defendant stands convicted.

Id

DEDICATION

(b) Dedication Resolution of Board of Directors—Reservation of Land for Park Persons—Present Offer to Dedicate.—A resolution passed by the board of directors of a corporation owning a tract of land, to the effect that a described portion of the tract shall be reserved for park purposes, constitutes a present offer to dedicate the portion described for park purposes, and not as a statement that the land shall be dedicated at some future time; and such acts, as the printing of advertisements containing the statement that the entire ocean frontage of the tract had been reserved for park purposes, the making of slight

improvements to fit it for public use, consisting of erecting two small pavilions, and placing steps in two places where the land was steep, are additional evidence of the intention to offer it for dedication.

Philips v. Laguna Beach Company, 64 Cal. Dec. 532.

(2) ID.—ACCEPTANCE BY PUBLIC—EVIDENCE.—Acceptance by the public of dedication of the ocean frontage of a tract of land for park purposes is sufficiently proven, where it is shown that the public soon began to occupy the property by camping thereon, and by parking their automobiles and other vehicles thereon, eating their lunches and viewing the ocean, and that two pavilions, while not large, were used as places to rest, or in which to sit and eat lunches and view the ocean, and that the property was recognized as a park by an improvement association which kept it clean from weeds and waste papers and placed garbage cans thereon, although the use by the public was not constant.

Id.

ELECTION LAW

(1) ELECTION LAW—PRIMARY LAW—BALLOT MARKED WITH PENCILED CROSS—COUNTING OF VOTES.—Notwithstanding the use of the words "stamping" "stamp" and "stamped" in section 18 of the Direct Primary Law (Stats. 1913, p. 1379), relating to the manner in which a voter shall prepare his ballot, the provision therein that "no ballot shall be rejected for any technical error which does not render it impossible to determine the voter's choice," is sufficiently liberal in its terms to permit the acceptance and counting of a ballot which the voter has marked with a penciled cross.

Castagnetto v. The Superior Court, 64 Cal. Dec. 337.

ESTRAYS

(1) ESTRAYS—IMPOUNDING BY OFFICER—OWNER WITHOUT FAULT—PAY-MENT OF CHARGES—COUNTY ORDINANCE.—An owner without fault, whose domestic animals have been driven off his premises against his will and without his knowledge or consent and left to run at large upon a highway, is not required to pay the fees and charges specified in a county ordinance relating to the impounding of animals found pasturing upon the public highways, in order to recover such animals from an officer who has impounded them.

Poole v. Clover, 38 Cal. App. Dec. 314.

INJUNCTIONS (See Trademarks)

(1) INJUNCTION—PROCUREMENT OF WATER SUPPLY—PAYMENT OF OVER-CHARGE—CLAIM OF PREFERENTIAL RATE—SHUTTING OFF WATER—RIGHT TO INJUNCTION PENDENTE LITE—DAMAGES.—A temporary injunction restraining a water company from shutting off a party's water supply will not issue pending the determination of an action brought by such party to have it declared that, by virtue of certain contracts, he is entitled to a water rate other than that fixed by the Railroad Commission, where such party can obtain his water supply at the rate fixed by the commission and if his action is determined in his favor his damage, if any, can be accurately measured by any overcharge which he may pay for water.

Pellisier v. Whittier Water Company, 39 Cal. App. Dec. 21.

(2) In. Remedy Character of .- The remedy by injunction is summary, peculiar and extraordinary and it ought not to be issued except for the prevention of great and irreparable injury.

Id.

INTOXICATING LIQUORS

(1) Alcoholic Lactors City Ordinance—Constitutional Ameniment for the representation of a city ordinance enacted prior to the adoption of the eighteenth amendment of the Constitution of the United States making it unlawful to sell or give away intoxicating liquors in any saloon or similar place of business, was not affected or its operation suspended by the enactment of such amendment although other provisions of the ordinance were rendered inoperative by such amendment.

In re Tosello, 38 Cal. App. Dec. 61.

(2) ID.—LOCAL LAWS UNAFFECTED BY AMERIMENT.—Neither the eighteenth amendment of the Constitution of the United States nor the Volstead Act were intended to affect or nullify prohibitory state or local laws.

Id.

LIBEL

(1) Label—Perblic Officer Acting in Discharge of His Duty—Privilege Waxi of Good Fath or Malice Immaterial Elements—Subdivision 1, Section 47, Civil Code. Under subdivision 1 of section 47 of the Civil Code, declaring a privileged communication is one made in the proper discharge of an official duty, a public officer acting expressly or impliedly in the discharge of his duty is protected by an absolute privilege, and want of good faith or malice are immaterial elements, and are not to be considered.

The Hale Company v. Lea, 39 Cal. App. Dec. 369.

MUNICIPAL CORPORATIONS

(1) MUNICIPAL CORPORATIONS IMPROVEMENT OF SEWER SYSTEM—PROPERTY OF USIDE OF CITY LIMITS—AUTHORITY UNDER IMPROVEMENT ACT OF 1911.

—A municipal corporation has authority under the Improvement Act of 1911 to construct adjuncts to the city's sewer system, such as septic tanks, etc., upon any convenient and appropriate parcel of land or right of way owned by the city, even though such land or right of way be located without the city's corporate limits.

Federal Construction Company v. Ensign, 39 Cal. App. Dec. 163.

(2) ID. NATURE OF IMPROVEMENT—BENEFIT OF CITY.—The construction of larger and more suitable flush tanks for disposal of sewage on the city's ourside property is not an improvement of such property but is one for the benefit of the inhabitants of the city and the lots and land therein.

Id.

(3) ID. ASSESSMENT DIAGRAM SHOWING OF LOCATION OF LOTS—CONSTRUCTION OF ACT—PLACE OF WORK. Subdivision 10 of section 20 of the Improvement Act of 1911 providing that the assessment diagram "shall show each separate lot, piece or parcel of land, the area in square feet and the relative location of the same to the proposed work to be done, all within the limits of the assessment district," does not require the assessment diagram to show that the work is within the limits of the district.

(4) Street Law—Local Improvement—Assessment of Entire City.— The fact that the benefits of the improvement extend to all the lots and lands throughout the city does not of itself deprive the enterprise of the character of a "local improvement" and therefore an assessment district may be made of the entire city and all the privately owned lots therein may be assessed to pay for the improvement.

Id.

(1) MUNICIPAL CORPORATIONS—CONSTRUCTION OF PUBLIC IMPROVEMENT— INJURY TO BUSINESS—DAMAGES NOT RECOVERABLE.—A municipal corporation is not liable for damages to the business of a private individual alleged to have been sustained by the construction of a street tunnel pursuant to a municipal ordinance.

Morris v. City and County of San Francisco, 39 Cal. App. Dec. 260.

- (1) LICENSE TAX-LOS ANGELES CITY ORDINANCE-TAX UPON CERTAIN PRESCRIPTIONS—DISCRIMINATION—CONFLICT WITH CHARTER.—A provision in an ordinance of the city of Los Angeles, intended as a revenue measure, to the effect that every person carrying on the business of a retail drug store where spirituous. vinous or malt alcoholic liquors, containing more than one-half of one per cent of alcohol by volume, are sold, distributed or given away for medicinal purposes upon a physician's prescription, shall pay fifty cents for each such prescription filled, and that nothing in the ordinance shall be deemed or construed to apply to prescriptions containing other ingredients than spirituous, vinous or malt alcoholic liquors containing more than one-half of one per cent of alcohol by volume, is obnoxious, in that it is discriminatory to subdivision 21 of section 2 of the freeholders' charter of Los Angeles, giving the municipality power to license businesses and callings, "provided, that no discrimination in the amount of license tax shall be made between persons engaged in the same business, otherwise than by proportioning the tax to the amount of business done." In re Tepper, 39 Cal. App. Dec. 628.
- (1) MUNICIPAL CORPORATIONS—ORGANIZATION—REGULARITY OF PROCEED-INGS—RIGHT OF CITIZEN OR TAXPAVER TO QUESTION.—The regularity of the proceedings by which a public corporation of a municipal character has been called into existence cannot be questioned at the suit of an individual citizen or taxpaver.

Van Wagener v. MacFarland, 38 Cal. App. Dec. 350.

(2) ID.—RIGHT OF STATE.—Where public corporations of any character are claiming to act and are actually functioning without having complied with the necessary prerequisites, they are usurping franchise rights as against paramount authority, to complain of which it lies only within the right of the state itself. The attack by the individual is unauthorized, whether it is made in defense of a tax levied to pay existing bonded indebtedness, or whether it be by injunction to prevent the issuance of bonds after an election has been held within the territory affected, authorizing such securities to be issued.

Tal

(1) MUNICIPAL CORPORATIONS—CLAIM OF PRIVATE PARTY AGAINST CITY—
REFUSAL OF AUDITOR TO ALLOW—MANDAMUS—RIGHT OF MAYOR TO MAINTAIN.—
The mayor of a city organized under a freeholders' charter is not authorized to maintain a proceeding in mandamus to compel the auditor of said city to allow the claim of a private party against the city for goods furnished the latter to be

used in carrying on a municipal market, where there is no direct and tangible interest on the part of the city in the payment of the claim.

Bartlett v. Bell, 38 Cal. App. Dec. 489.

1) MUNICIPAL CORPORATIONS JUDGMENT AGAINST FOR REPLAYMENT OF TAXES PAID UNDER PROTEST CHARACTER OF INDERTEDESS MANNER OF REPLAYMENT. Where a taxpaver holds a final judgment against a city and county for the repayment of taxes paid under protest and seeks to compel said city and to pay said judgment, said proceedings for the levy and collection of a tax sufficient county to take appropriate city and county is not asked to "incur" an indebtedness in excess of its income and revenue in violation of section 18 of article XI of the Constitution, but is asked to provide the necessary income and revenue sufficient to meet an indebtedness imposed upon it by law.

Oscar Heyman & Brother v. Bath, 38 Cal. App. Dec. 604.

(1) MUNICIPAL CORPORATIONS POLICE POWER REGULATION OF KEEPING OF GOALS. A municipality possesses the police power by virtue of section XI of section II of the Constitution to regulate the keeping of goats.

In re Mathews, 38 Cal. App. Dec. 726.

(2) ID. MUNICIPAL ORDINANCE—KEEPING OF GOATS—DISTANCE FROM DWELLING—REASONABLE RECULATION—CONSTITUTIONAL LAW.—A municipal ordinance prohibiting the keeping of goats closer than 50 feet to the nearest dwelling is constitutional and a reasonable enactment.

Id.

(1) MUNICIPAL CORPORATIONS—COLLECTION AND DELIVERY OF GARBAGE—NEGLIGENCE OF EMPLOYEES—LIABILITY OF CITY—EFFECT OF SALES OF GARBAGE.—A municipal corporation in collecting and delivering the garbage of its inhabitants to the municipal incinerator under and by virtue of a municipal ordinance, acts in a governmental and not in a proprietory capacity, and therefore is not liable for the negligent acts of its employees in making such collection and delivery, notwithstanding it recoups some of its expenditures in the premises by the sale of the garbage after its delivery to the incinerator.

Manning v. The City of Pasadena, 38 Cal. App. Dec. 736,

(1) MANDAMES PAYMENT OF JUDGMENT AGAINST CITY AND COUNTY OF SAN FRANCISCO PROCEEDINGS FOR INCLUSION IN TAX LEVY LIMITATION TO JUDGMENT OF PETITIONER. An application by the holder of a judgment against the City and County of San Francisco for a writ of mandate to compel the board of supervisors to take the appropriate proceedings for the levy and collection of a tax sufficient to pay all final judgments against the city and county that were included in a list of final judgments filed by the county clerk with the county auditor during the current fiscal year will issue in so far as the judgment of the petitioner is concerned, but not as to others who hold judgments where the petition fails to allege facts bringing the petition within the terms of section 1086 of the Code of Civil Procedure which provides that the writ must be issued upon the verified petition of the party beneficially interested.

Palace Hotel Company of San Francisco v. Board of Supervisors, 38 Cal. App. Dec. 783,

(1) MUNICIPAL CORPORATIONS OAKLAND CHARTER—RETIREMENT OF MEMBERS OF PIRE DEPARTMENT—PROVISION RETROACTIVE.—Section 102 of article XV of the charter of the city of Oakland (Stats, 1911, p. 1364), providing for the

retirement of members of the fire department on a pension after twenty-five years of service is retroactive, and service prior to the adoption of such provision is to be taken into consideration in making such computation.

Whitehead v. Davie, 64 Cal. Dec. 369.

(1) NEGLIGENCE—DRIVING VEHICLE ASTRIDE OR IN CLOSE PROXIMITY TO STREET CAR TRACKS NOT NEGLIGENCE PER SE.—The mere fact that one is driving a vehicle astride of or in close proximity to street car tracks is not negligence per se.

Simmons v. Pacific Electric Railway Company, 39 Cal. App. Dec. 647.

(2) ID.—USE OF PUBLIC HIGHWAY.—RIGHT OF STREET RAILWAY.—Public highways are for the use of the traveling public, and the right of a street car company is only to use the street in common with the public. The railway company has no exclusive right to travel even over that portion of the street which is covered by its tracks.

Id.

(3) I.—FAILURE TO KEEP CONSTANT WATCH BEHIND FOR APPROACHING CAR NOT NEGLIGENCE PER SE.—It is not negligence per se for one who is driving his vehicle astride of or in close proximity to a street car track to fail to keep constant watch behind for an approaching car.

Id.

POLICE POWER

(1) POLICE POWER—CONDUCT OF PUBLIC DANCE HALL—ARBITRARY RE-FUSAL TO RENEW PERMIT.—Where a permit has been given by a board of police commissioners to conduct a public dance hall, and thereafter quarterly permits are given, the board has not the right to arbitrarily and capriciously refuse to issue any further permits.

The Pavilion Ice Rink v. O'Brien, 39 Cal. App. Dec. 676.

(2) ID.—INJUNCTION TO RESTRAIN INTERFERENCE.—An injunction will issue to restrain the police department from interfering with the business of conducting a public dance hall until the right to conduct such business is legally revoked.

Id.

(1) Police Power—Conduct of Lawfel Business—Confiscation— Arbitrary Action of Official Body.—A lawful business properly conducted and not injurious to persons, property or public welfare cannot be confiscated by the arbitrary and capricious dictation of any official body.

The Pavilion Ice Rink v. Bryant, 38 Cal. App. Dec. 658.

PROHIBITION

(1) PROHIBITION—CLOSING OF STREET—PROCEEDING NOT JUDICIAL.—A writ of prohibition will not lie to prohibit a board of town trustees from closing a street under proceedings taken under the act of 1889, since the proceedings are not of a judicial character.

Garin v. Pelton, 38 Cal. App. Dec. 740.

PUBLIC OFFICERS

(1) Public Officers—Employment—Property Right.—The possession of an office, or the enjoyment of employment with the government, or under any of its agencies, does not confer a vested property right of any quality whatsoever.

Boyd v. Pendegast, 38 Cal. App. Dec. 58.

PUBLIC UTILITIES

(1) PERMIC CHITTIS WATER AND WATER RIGHTS SUPPLYING HOLDERS OF CONTRACTION PROPERTY. A water company engaged in supplying water to the holders of contractual rights and which devotes its water to no other use, except to supply a definite quantity of water for the independent use of one corporation, is not a public utility and subject to the jurisduction of the Railroad Commission because of such exception.

McCullagh v. The Railroad Commission of the State of California, 64 Cal.

Dec. 427.

(2) ID. DECISION OF RATIFICAD COMMISSION STATUS OF WATER COMPANY PERSONS NOT CONCELLED BY. A decision of the Railroad Commission in a previous proceeding to have a water company declared a public utility is not binding on persons in interest who were not made parties to such proceeding, nor concerned in the issues presented therein in so far as the establishment of water rates affecting them were concerned.

(3) In.—Dedication of Water to Public Use.—Manner of Revocation. Having dedicated its water to a public use, a water company cannot revoke such dedication and convert its waters into a private use without the consent of

all of the beneficiaries of such use.

Id.

(1) PUBLIC UTILITIES—UNION TERMINAL DEPOT FACILITIES FOR RAILROADS JURISDICTION ACT OF CONGRESS OF 1920, AMENDMENT OF INTERSTATE
COMMERCE LAW,—Under the Act of Congress of 1920, amendatory of the Interstate Commerce Law, full power and authority over the matter of union terminal
depot facilities of the railroads which are largely engaged in interstate commerce
has been vested in the Interstate Commerce Commission, and by virtue thereof
the Railroad Commission of California has been divested of the power, authority
and jurisdiction over that subject.

Southern Pacific Company v. Railroad Commission, 64 Cal. Dec. 557.

(1) Public Work Failure to File Verified Claim in Time—Statetory Bond—Relief Under Faithful Performance Bond—A materialman, furnishing materials for public work, who fails to file with the board of supervisors a verified statement of his claim within ninety days from the time the contract for the work is completed, as required by the act of 1897 (Stats. 1897, p. 201), is precluded from recovering on the bond given pursuant to the requirement of said act, and such failure affords no ground for relief under an additional bond—a faithful peformance bond—given under, and required by, the contract, which latter bond was intended for a different purpose.

Maryland Casualty Company v. Shafer, 38 Cal. App. Dec. 126.

REDLIGHT ABATEMENT ACT

(1) APPEAL JUDGMENT IN RED LIGHT ABATEMENT ACT—CLOSING OF BELLING. FINICETION ON JUDGMENT NOT STAYED BY PERFECTION OF APPEAL—SECTION 949, COID, OF CLYBE PROCEDURE.—Under section 949 of the Code of Civil Procedure, as amended in 1921, the perfecting of an appeal from a judgment rendered in a red light abatement proceeding, by which a building was ordered closed and its occupants and the personal property therein ordered removed, does not stay execution on such judgment.

People etc. v. Piazza, 39 Cal. App. Dec. 35.

(2) ID.—Loss of Rental From Closing of Building.—Supersedeas.—A writ of supersedas staying execution on such a judgment will not issue where it is sought upon the ground that loss of rental will ensue from the closing of the building.

Id.

SCHOOL LAW

(1) School Law—Character of Dancing—Objection of Parents.—In denying the petition for a hearing of this appeal in the Supreme Court after decision by the District Court of Appeal, the character of dancing described in the petition involved (36 Cal. App. Dec. 517), cannot be properly required of children whose parents object thereto.

Hardwick v. Board of School Trustees Fruit Ridge School District, 64 Cal. Dec. 373.

(1) SCHOOLS—ORGANIZATION AND GOVERNMENT—GENERAL LAWS.—The organization and government of the public school system is a public matter and governed by the general laws of the state, and in case of conflict the general laws of the state control.

Board of Eduction of the City of San Rafael v. Davidson, 64 Cal. Dec. 519.

STREET LAW

(1) Street Law—City of San Jose—Irregularities in Procedure—Failure to Protest or Appeal.—Waiver.—An assessment for street work performed pursuant to the provisions of the city charter of San Jose, of the so-called Vrooman Act and of the Street Improvement Bond Act of 1893, cannot be collaterally attacked in a suit to quiet title for irregularities in procedure after the council had regularly acquired jurisdiction to order the work done, where no protest against the work was made under section 5½ of the Vrooman Act, or any appeal taken therefrom under section 11 thereof.

Chapman v. Rudolph, 38 Cal. App. Dec. 385.

(1) STREET LAW—SAN FRANCISCO STREET IMPROVEMENT ORDINANCE OF 1913—PLAN OF ASSESSMENT—EXCLUSION OF LANDS BENEFITED—DENIAL OF EQUAL PROTECTION OF LAWS.—In an action to foreclose liens for street work done under the San Francisco Improvement Ordinance of 1913, where the work was not done under an assessment district or levied on property fronting or cornering thereon, and as a result there was no rule, measure or standard to which the board of public work was required to conform in making the assessment, and the defendants' property was assessed to the exclusion of other property likewise benefited, there was a denial of the equal protection of the laws.

Flinn v. Chiappari, 38 Cal. App. Dec. 687.

(2) ID.—VALID ORDINANCE—ESSENTIALS.—An ordinance must provide a uniform rule of action; it must contain permanent legal provisions, operating generally, impartially, for its enforcement cannot be left to the will or unregulated discretion of municipal authorities.

Id

(1) ACTION TO QUIET TITLE—DEED MADE UNDER CONGRESSIONAL GRANT— CLAIM OF EASEMENT FOR PUBLIC STREET—CHARACTER OF OCCUPANCY—FINDING— EVIDENCE.—In an action to quiet title to a lot of land, in a portion of which the defendant municipality claimed an easement for a public street, said defendant

PROPER LINING FOR CHIMNEYS AND FLUES FOUND ESSENTIAL.

By GEORGE HYDE EMERY

Sales Manager Pacific Clay Products Company, Los Angeles

One never realizes as he sits in the warmth and glow of a fire, or labors over a stove, of the wealth of experimentation- expended to keep that heat from injuring life and property.

Hidden from sight, often between the walls, is the chimney flue.

We never give it a thought as it draws up the myriad of little sparks or the fatal gases without leaving the slightest trace of odor.

But it really is one of the most important features of a home and it is as impossible for the best mechanic to produce a good chimney from improper materials as it would be to make a watch of muslin.

The ordinary brick and mortar chimney, as commonly constructed, is laid up with sand and cement mortar. Sometimes it is plastered on the inside to make the chimney smooth.

The heat in time causes the mortar to dry out and disintegrate, collecting in piles at the foot of the chimney and leaving holes through the chimney walls.

Sand is a risky ingredient in flue linings. Heat transforms sand into clinkers. Heat breaks up a wall containing sand and develops cracks.

Such a condition usually goes unnoticed and is a constant source of danger from fire.

POOR FLUES DANGEROUS

It has been authentically determined that improperly constructed chimney flues were responsible for a fire every hour of every day over a period of three years back, resulting in the total loss of over \$16,000,000.



HOW FIRES START Through the Mortar Joints of the Ordinary Unlined Brick Channey Sparks Otten Pass

It is a fact, though many have learned it too late, that the mortar joints of an unlined chimney crack and crumble from the heat.

Chimneys that are uneven or rough inside choke up with soot and fail to draw off the gases, known among miners as "Choke Damp," which is given off by any fire.

A slight trace of this gas, "carbon

monoxide," often causes serious illness and is always bound to produce headache and languor.

ABOUT GAS FLUES

One is prone to assume that the tiny jets of a gas stove can be accommodated by any kind of a flue, but the first fire from overflowing fat happened a long time ago and there have been many of them since.

The chimney of a gas stove may be called upon but once to withstand the severest of service and if it is not lined properly, once may be too often.

The sure remedy for all chimney ills, including fire hazard, smokey chimneys and poor draught, is by the use of fire clay flue lining.

Fire clay flue lining, as its name implies is manufactured from carefully selected refractory clays.

It is made in two foot lengths of different sizes and shapes to suit varying conditions and is burned at 3,000 degrees Fahrenheit.

This causes any weakness to develop before it is cold.

CLAY LINING

Fire clay flue lining fireproofs a chimney from bottom to top—for a few dollars.

Its smooth surface does not gather soot. This reduces chances of flying sparks.

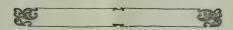
Also, it saves costly chimney sweepings, and the smooth, clean leakless flue causes the chimney to draw better.



Showing Installation of Fire Clay Flue Lining

Fire clay flue lining, specified by leading Architects, used by reputable builders and required by ordinance of the National Board of Fire Underwriters, prevents 30 per cent of residence fires by making it impossible for flames to reach woodwork through defective flues, and by preventing burning soot and sparks on the roof.

For a very few dollars, it really insures the results of your labor. Fire clay flue lining is better than the protection of insurance, because it is the assurance of protection.



Cheaper and Better Houses Object of Commerce Department Report

Cheaper and more durable dwellings for the American people is the object of a report made public by the Building Code Committee of the Department of Commerce, and characterized by Secretary Hoover as having "a value far beyond any similar work undertaken to date."

The committee has included not only the minimum requirements which it believes should be enforced by cities in their building codes for all one and two-family houses, but also an appendix discussing good practice in small house construction. In this way the 100 page printed report not only serves the primary purpose of presenting a model ordinance which cities may adopt, but is a useful guide to all who are interested in knowing where to save and where to spend in order to obtain a safe, substantial and durable house at a minimum cost. Thirty illustrations are included to explain the text.

In a letter of acknowledgement addressed to Mr. Ira H. Woolson, Chairman of the Building Code Committee, Secretary Hoover states:

"I am confident that the generous and voluntary contribution of time and energy which you and your colleagues have given to this work will result not only in a very appreciable money saving to millions of American families, but that it will have a positive influence toward better housing that can not be counted in dollars.

"This report has been built up by cooperation of the Government and the public, which I feel will appeal to everyone. The committee itself represents the great voluntary organizations most interested in public service in this

direction, but beyond this you have consulted with many other associations and you have submitted the report in its preliminary form to over 900 municipal officials, architects, engineers, officials of trade associations, and incorporated their criticisms into its final form. I believe this method of intellectual legislation is unique and gives the report a value far beyond any similar work undertaken to date.

"I join with you in the belief that it will be helpful not only through practical use by municipalities in building codes and in promoting greater uniformity in codes throughout the country, but that with its appendix it will prove directly useful to owners and builders of dwellings generally. * * * "

The report is believed to represent by all odds the most thorough investigation that has yet been made of the engineering and practical side of house building. This subject has never before received even a small part of the expert study that should be due it and hence millions of our small houses have been built with needless waste of some materials, yet with neglect of simple precautions necessary for comfort and durability.

The committee of eminent men making this report includes representatives of the principal architectural, engineering and other interested professional societies and was constituted as follows:

Ira H. Woolson, Chairman, Consulting Engineer, National Board of Fire Underwriters, New York, N. Y.; Edwin H. Brown, Architect, Minneapolis, Minn.; William K. Hatt, Professor of Civil Engineering, Purdue University, Latayette, Ind.; Rudolph P. Miller,

formerly Superintendent of Buildings, New York, N. Y.; John A. Newlin, incharge of section of timber mechanics, U. S. Forest Products Laboratory, Madison, Wis.; Ernest J. Russell, Architect, St. Louis, Mo.; and Joseph R. Worcester, Consulting Engineer, Boston, Mass.

The work was initiated and the committee was appointed by Secretary Hoover on account of the fact that building codes and builders, frequently fail to recognize modern methods of construction, thus adding to building costs and retarding construction activity.

This first report of the committee deals with the construction of one and two-family houses of masonry, concrete and frame types, the latter including veneer and stucco. The value of such construction in the United States amounted to well over a billion dollars in 1922. It is expected that general adoption of the code, with consequent modification of present unjust and wasteful requirements, will result in substantial conservation of materials, and the saving of many millions of dollars.

The committee recommend that building codes permit eight-inch solid brick, and six-inch solid concrete walls, for 21/2 and 3-story dwellings accommodating not more than two families each. Only about forty per cent of the present city building codes investigated permit eight-inch walls in such dwellings. Eightinch walls of hollow building tile, hollow concrete block or hollow walls of brick are permissible, but may not exceed 20 feet in height with an additional 5 feet to the peak of the gable. Frame construction would be limited to 21/2 stories under the recommendations of the committee.

Metal lath and plaster on wood studs properly firestopped is approved for party and division walls, but at least every alternate wall in row houses must be 8-inch solid brick or concrete, or 12-inch hollow masonry. Requirements for quality of hollow masonry units agree fairly well with present practice, but those for brick are somewhat below the medium grade established by the American Society for Testing Materials. The report recommends revised working stresses for timber used in dwellings, based on investigations of the U. S. Forest Products Laboratory. For other materials experimental work of the Bureau of Standards was freely drawn on.

Live loads to be required as bases for design are 40 pounds per square foot for floors of wood, and 30 pounds for monolithic floors or those of solid or ribbed slabs. Foundation walls of brick are required to be 12 inches thick for excavated enclosures, and similar concette walls shall be as thick as the walls they support, but not less than 8 inches. Special hollow building tile 12 inches thick is permitted for foundation walls of frame buildings.

In addition to the requirements in the code itself, the appendix contains a mass of valuable information on the quality of materials which should be used for good results. This section includes tables showing safe sizes of floor joists and girders, a discussion on protecting lumber against decay, an analysis of methods to be followed to avoid cracking of plaster, and advice on furring the inside of masonry walls.

The discussion of built-in garages, both in the code and the appendix, is regarded as particularly valuable in view of their comparative novelty and their relation to fire hazards. The report is full and explicit on this point. Proper methods of chimney construction and of fire-stopping are also treated. A number of valuable references are given to easily obtainable pamphlets dealing with special points.

The report may be obtained from the Superintendent of Documents, Washington, for 15 cents a copy.

Municipally Owned Hydro-Electric Power For Sacramento and Adjacent Territory

Written expressly for Pacific Municipalities

By H C BOTTORFF, City Manager, Sacramento

Sacramento now has before it the opportunity to underwrite its future as the leading industrial and commercial city of California and become one of the principal participants in the new Pacific Coast prosperity.

Electrical energy in abundance, and at a cost at ultimate development that will approximate one-half of the present rate, is the means that will secure to the city and its surrounding territory these benefits, and that power can be secured and controlled through municipal ownership that will always administer it in the interest of the people who are served.

The hydro-electric development will be located on Silver Creek, one of the tributaries of the American River, in the Sierra Nevada mountains, approximately sixty miles from the City of Sacramento. The city has acquired water rights for the generation of electric energy.

The method to be pursued in the financing of same will be through what is known as a Municipal Utility District, as provided in Chapter 218, Statutes of 1921.

The proposed publicly owned and operated hydro-electric plant is one of the many activities worked out by the City Manager form of government since its inception on July 1, 1921. The administration realized the need for cheaper power for this locality if it was to make the proper progress industrially. At the time of taking office, the administration immediately proceeded to look into the feasibility and practicability of developing hydro-electric power on the Silver Creek watershed. Instructions were

given to the engineering staff to go into this and make a report. An appropriation of \$15,000.00 was made for this purpose, and the staff of engineers was put into the field in June, 1922, and by October their studies were completed. Since that time a staff of office engineers has been busily compiling this data, making estimates, and gathering information from other cities which own and control their own power plants.

The surveys showed that there was a very good reservoir site at Union Valley, and with a dam 302 feet high it would have an impounding capacity of 164,000 acre feet. This reservoir is located on the main fork of Silver Creek and covers an area of 2,060 acres.

On the south fork of Silver Creek just above Ice House, at an elevation of 5,300 feet, another good reservoir site was found which will be known generally as the Ice House reservoir. This reservoir, with a dam 138 feet in height, would have an impounding capacity of 46,000 acre feet, giving a total impounding capacity on these two reservoirs of 210,000 acre feet.

The survey indicated that the strategic location of the first plant would be at the Big Bend of Silver Creek, and at this point, with an area of watershed above the main dam and with a total reservoir capacity impounding 263,000 acre feet, there could be delivered at the Big Bend power plant, which has a head of 1,650 feet, some 450 cubic feet per second continuous flow. This would allow the development at this point of some 65,000 continuous horsepower, or with a 50

per cent load factor, which is usual in stations of this size, a development at peak load of 130,000 horse-power of electrical energy.

As the need arises for future development, a second power plant could be located at the mouth of Brush Creek below the Big Bend site, by an expenditure of a small amount of money, and a further development of 86,000 horsepower of electrical energy could be developed.

A third power plant would be located in the neighborhood of Coloma and would have a head of some 800 feet. This would give a potential generating capacity at this station of 34,000 continuous horsepower, or with a load factor of 50 per cent, some 68,000 horsepower.

Our studies show that the project would have the ability by this development to carry a peak of 284,000 horse-power, and could deliver continuously 24 hours a day about 142,000 continuous horsepower.

In addition to these possibilities in the development of power, it also would place the city in a position to forever protect and stabilize its water supply, as it would be possible to supply a population of one million people with the runoff from the rights that have been acquired by the City of Sacramento.

It has been deemed advisable for the first unit of development to put in a 32,000 horsepower plant, which is twice the present peak load of the City of Sacramento.

It has been estimated that this first development would cost \$4,000,000.00. This includes all necessary construction and installation to bring electric current to the City of Sacramento, and also includes the cost of constructing a main sub-station at the city limits.

It will be our recommendation to the directors of the district after same is formed that the first step should be the acquiring of the two distributing systems in Sacramento owned by the Great Western Power Company and the Pacific Gas & Electric Company. According to the figures submitted by the State Railroad Commission, these systems can be secured for approximately \$4,000,000.00.

The advantage of this plan of procedure is at once apparent when the matter of operating revenue is considered. Based upon the income of the power companies in Sacramento in 1921, the project would yield an annual profit of about \$660,000.00.

On a capital investment of \$8,000,000.00, allowing for interest, redemption of bonds, depreciation, sinking fund, and the operation of the system, the annual cost would be approximately \$900,000.00. This deducted from the gross revenue for this city, would leave the above annual profit.

Under the Utility District Act, the first redemption of bonds will be ten years after date of issue. In other words a fifty year bond will be redeemed in forty years, which will enable the district to accumulate a surplus during the first ten years and easily care for the interest and redemption, operation, etc. By handling it on this basis, it never need cost the taxpayers within the proposed district a cent.

In analyzing the Municipal District Act, we find that every protection has been given by the framers of the bill to the taxpayers. There is not a step made by the directors in developing the project that is not passed upon by the voters.

It has also been determined from out study of the proposed plan that it will be possible to sell power to the consume for approximately one-half of the present rate and still make sufficient money to take care of all costs.

The time is near at hand when Eastern manufacturers distributing their products

on the Pacific Coast will have to establish branch factories in this state in order to get away from the expensive cross-continent haul. Sacramento desires to be in a position to encourage such industries by offering them cheap power, which is, next to salaries and material, the major expense of any industry. This city already has the transportation facilities and is as close to the raw material markets as any other location on the Coast. By developing our industries. every other business activity advances accordingly.

Weeks and months of effort have been put into this plan by the officials of the city and we cannot find any legal or financial objection to the method of handling the enterprise. It is to our minds the first real step forward in developing Sacramento and Northern California, and we are fully convinced that the citizens, after they have become familiar with the details, will not hesitate to put through this project.

THE CHARTER GAS ENGINE COMPANY ANNOUNCES THE PURCHASE OF THE MIETZ OIL ENGINE

The Charter Gas Engine Company of Sterling, Ill., U.S.A., announces the purchase of the entire "MIETZ" Oil Engine (also known as "Mietz and Weiss") business, hereto-Known as "Mietz and weiss" business, nereto-fore carried on at 128-138 Mott Street, and 430 East 19th Street, New York City, by the August Mietz Corporation and the Reliance Oil Engine Corporation. This effects a merger and consolidation, under one management, of two of the oldest and best known internal combustion engines in the world.

The Charter Gas Engine Company is now moving from New York City to their plant at Sterling, Ill., all of the physical assets com-prising the "MIETZ" Engine and in the meantime is filling repair orders from New York City, so that there will be no interruption in repair service to "MIETZ" engine users.

It is announced that "MIETZ" engine users.

Will be able from now on to obtain prompt and reliable repair service for any "MIETZ"

Engine ever built.

A number of the personnel of the August Mietz Corporation organization have been engaged for work by the Charter Gas Engine

engaged for work by the Charter Gas Engine Company insuring a thorough working knowl-edge of the manufacture of "MIETZ" Engines. In order to handle the added business properly arrangements for additional floor space have been completed, whereby the area of the present Charter plant is almost doubled.

CHARTER GAS ENGINE CO., Sterling, Ill.



PARAGON Fire Hose

"Anything less than the best in fire hose is a losing investment."

United States Rubber Co.

EUREKA FIRE HOSE DEPARTMENT 1104 I. N. VAN NUYS BLDG. LOS ANGELES, CAL.

812 SEABOARD BLDG



PUBLIC SALES

We have purchased 122,000 pair U. S. Army Munson last shoes, sizes 5% to 12 which was the entire surplus stock of one of the largest U.S. Government shoe contractors.

This shoe is guaranteed one hundred per cent solid leather, color dark tan, bellows tongue. dirt and waterproof. The actual value of this shoe is \$6.00. Owing to this tremendous buy we can offer same to the public at

\$2.95

Send correct size. Pay postman on delivery or send money order. If shoes are not as represented we will cheerfully refund your money promptly upon request.

National Bay State Shoe Company

296 Broadway, New York, N. Y.

· Continued from page 1015

cannot successfully maintain that the deed to plaintiffs' predecessor to said lot made under a congressional act, and which deed made no provision for a public street, was void because said predecessor was not a bonn fide occupant of the lot as required by said congressional act, where the question of the character of such occupancy was determined as a question of fact adversely to defendant's contention, and the evidence was sufficient to support the court's finding.

Gervasoni v. City of Petaluma, 64 Cal. Dec. 88.

TAXATION

(1) TAXATION-NON-OPERATIVE PROPERTY OF CORPORATION-CLAIM OF COUNTY ASSESSOR-FILING OF NOTICE AND PROTEST WITH STATE BOARD OF EQUALIZATION-MANDATORY ENACTMENT-ACT OF 1911.—The determination of the question as to whether any certain property of a public service corporation is or is not subject to state taxation as "operative property used exclusively in its business", is one which is committed in the first instance to the state board of equalization under and by virtue of the procedure outlined in section 10 of the act of 1911, enacted to carry into effect the provisions of section 14 of article XIII of the Constitution regulating state and local taxation of corporate properties, and the provision of said section 10 of the act of 1911 that when any local assessor finds in the report which the corporation has made to the state board of equalization, and of which he has been furnished a copy, any piece of property which he regards as non-operative property or as partially operative and partially non-operative, he shall within a specified period notify said board of his claim, is mandatory and not merely permissive, and where such notice is not given the assessor is without jurisdiction to thereafter assess such property for local taxation purposes, and his attempt to do so is utterly void, and not merely an irregularity.

Great Western Power Company of California v. City of Oakland, 64 Cal. Dec. 329.

(1) TANATION—EDUCATIONAL INSTITUTION OF COLLEGIATE GRADE.—Under article XIII, section 1, of the Constitution educational institutions of collegiate grade and entitled to exemption from taxation when, and only when, the property sought to be exempted is used exclusively for educational purposes coming within the scope of the work of an institution of that class.

Pasadena University v. County of Los Angeles, 38 Cal. App. Dec. 304.

N. CLARK & SONS

INCORPORATED 1888
Manufacturers of

ARCHITECTURAL TERRA COTTA, PRESSED BRICK
VITRIFIED AND TERRA COTTA PIPE
HOLLOW TILE FIRE PROOFING
FIRE BRICK TILE AND KINDRED CLAY PRODUCTS

Office: 112-116 Natoma St. WEST ALAMEDA SAN FRANCISCO

DISCUSSION AT PALO ALTO

Of the Proposition to Deprive Cities of Their Control Over Street Railway Franchises

Mr. G. Gordon Whitnall, of Los Angeles: May I, Mr. President, offer just one observation on one phase of the subject mentioned by both speakers for the affirmative, but not elaborated upon by either? I may say, in passing, that I have the utmost regard for the gentlemen and their calling, for we find from them and their associates in the south, our finest support. I feel, however, that the matter they are driving at is not to be found in legislative enactments or to be reached by legislative means. I believe confidently,

from a consideration of local conditions in the south, that the problem revolving around transportation is an economic rather than a legal one. And I will submit, in illustration of that, a statement that I believe will carry its own weight. We have had there an agitation on the part of the city, to compel, if possible, the extension by the railroad of a certain street car line to accommodate a certain section of the city. This extension would approximately be three miles in length. It was submitted to the

LAFRANCE DELUGE SET

Produces a Mighty
Fire Fighting Stream



Continued on page 1131

The LaFrance Deluge Set is fitted with a 3-way aluminum Siamese with automatic valves which enable the Siamese to be used with one, two or three lines of 2½-juch hose. There is a 3½-juch LaFrance holder complete with our latest improved aluminum platform. One section 10 feet long of 3½-juch cotton rubber lined deluge hose is furnished, together with reducer and proper tips.

> Manufactured and guaranteed by the world's largest and oldest manufacturer of fire apparatus.

AMERICAN AFRANCE FIRE ENGINE COMPANY, INC.

151 NEW MONTGOMERY ST SAN FRANCISCO, CAL. 1302 WASHINGTON BLDG LOS ANGELES, CAL.

Are Your Streets Being Improved?

If so then you should consider the advisability of insuring your proceedings, your improvements and your assessment to comply with all the technicalities and intricacies of the law.

Then is the time you want expert advice, forms, bonds and books that agree with the street laws including all amendments.

Years of specializing on this phase of the law enables us to properly and legally assume responsibility for the correct fulfillment of your order.



46 years of continuous service to municipalities is our guarantee.

That's good insurance.

A. CARLISLE & CO.

Continued from page 110)

Railroad Commission. Their engineers studied the matter. The railway company's engineers studied the matter. Our own engineers studied the matter. They were almost unanimous in their estimate of the approximate cost of the extension, namely, the sam of, in round figures, \$600,000. The railroad, however, did not see fit to make the extension, the Railroad Commission did not see fit to order the extension made, for the reason that there was no conceivable way of realizing a return upon that investment. On three miles of railroad, under an expenditure of \$600,000 by way of investment, they could not conceivably have a return. Under the State Railroad Commission, they would be entitled to a return of eight per cent for interest alone, to say nothing of operation cost-merely interest on the investment alone, then, would require \$48,000 a year, which, translated into passenger fares, would require a new passenger carrying amounting to 2,660 passengers a day. The area of tributary territory was not sufficiently densely developed to contribute that many passengers to the system-it could not possibly be done. And assuming that they could get that 2,660 passengers a day, they would then only be making the interest on the investment. For five years previous, in a small way, the municipality has been engaged in a transportation enterprise by means of

buses. Through definite records that have been kept in that period of five years, we find that we could absolutely duplicate the service intended to be rendered by this three mile extension for an initial capital investment of \$8,250, or, in round figures, only about one-sixth of the annual interest rate on the investment necessary on the part of the street railway.

So I believe, Mr. Chairman, and gentlemen of the convention, that right there is really the basic trouble of the whole question. It is true that there is not much comparison between motor vehicle transportation and street railroad transportation. They each have their faults. But the privately owned conveyance has come to stay, for the people want it. And I repeat that I believe the difficulty lies in the economics of the thing rather than the legal phases of it, and that the only way we can solve it is to assist the transportation systems from the economic standpoint.

The President: Does anybody else desire to speak upon the subject from the floor?

Major Kirkbride: I think the underlying motive back of this and a lot of coordinated measures has to do with the control of the streets of the cities. I have been surprised to see so general a development in recent years that seems to be taking away from the municipalities the control over their streets. I called attention, at the meeting of the city

FAIRCHILD-GILMORE WILTON CO.

Paving Contractors

Rooms 500-504

Los Angeles Railway Building

Los Angeles

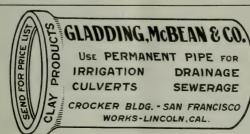
EDWARD GLASS

UNDERWOOD BLDG. SAN FRANCISCO

attorneys' session vesterday, to the amendment of the last Legislature in eliminating from the provisions of the Civil Code the requirement that there should be inserted in all franchises a clause requiring the grantee to maintain the streets for two feet on each side of the rails and between the rails and hetween the tracks. That was put through the last Legislature, and has already developed a series of troubles, within my knowledge, at least, to cities in this state. And I understand that the Real Estate Association that is moving in this matter, has already promulgated something in the direction of relieving the traction companies of any obligation to pave between the rails and for two feet on each side. Bearing that particular thought in mind, we also want to bear in mind the corresponding provisions of the Motor Vehicle Act. that have the effect of not giving us, as we deem it, a fair proportion of the license taxes received from motor vehicles, and also forces upon us the burden of enforcing the Motor Vehicle Act inside the corporate limits, with the requirement, so far as the Act itself is concerned, that we pay the fines into the county treasury. And my experience, that it has resulted in our not being able to get them back again.

All this has a tendency to do two

things: It first takes away from the municipality the control over its streets. and in the second place, it forces upon the property owners in the municipality the burden of maintaining the street for the entire width. So far as that burden of maintaining the street for the entire width, is concerned, I imagine that the property owners could take all that burden, if it were not for the fact that no payment that the property owners would put down between the rails and for two feet on each side but would be destroyed almost immediately as the result of the traction operation. I have seen asphalt concrete pavement laid along side of rails and almost instantly upheaved as the result of the first cars going over the rails. The railroads of the country have found that it is a problem, a very serious problem, how to construct a scientific project. The best results so far obtained have been by putting in a very substantial sub-grade, way down below the ties. How are we going to construct a pavement and assess it upon the property owners between the rails and the two feet on each side and between the tracks, and then come around in the course of a few months or a few years at the outside and ask those property owners to repave? While that burden is a very serious one, it seems to me it is a burden that is necessarily or should



necessarily devolve upon the utility that creates the difficulty, and that utility is the traction line, due to the fact that their heavy cars necessarily create a movement in the rails that will break up almost any pavement.

Now, this indeterminate franchise would do this: Give a present street franchise, we will say in San Francisco or any other city containing a clause in it to the effect that the utility must maintain the street between the rails and for two feet on each side, which clause in the franchise constitutes a contract which that utility is bound to observe. Under this constitutional amendment, that utility would immediately surrender its franchise and ask for a determinate or indeterminate new franchise, eliminating that clause, And then our municipalities would immediately have to take the burden of maintaining the pavement between the tracks and between the rails and for two feet on each side.

I take it that the problem is, as stated by the preceding speaker, an economic problem, so far as extensions and financing are concerned. Many of us city officials have been on record for years in favor of an indeterminate franchise, without intangible value being taken into consideration, and subject to be taken over by the public at any time. If they want an indeterminate franchise, let them go and ask for it, and have the Broughton Act amended accordingly. But this proposition is a proposition that means, and I take it fundamentally, and so far as the immediate results are concerned will be, that the railroad companies will try to avoid responsibility for street work.

The President: The hour is growing late, and we have two other amendments for consideration on the program, and besides that, we would like to talk about others that should be on the program. So, with your permission, I will limit further discussion of the subject to three minutes from each speaker.

Mr. Malcolm, of Palo Alto: The constitutional amendment proposed here, and which you will see upon these pamphlets, gives exclusive power to the

Sacramento
Capital National Bank Bldg.

San Jose Bank of Italy Bldg. Los Angeles Fay Building

WILLIAM DOLGE & CO.

Certified Public Accountants

Municipal Accounting

Audits, Examinations and Special Examinations. Accounting Procedures for Municipal Utilities. Budget Systems Installed

Telephone Sutter 697

369 Pine Street

San Francisco, Cal.

State Railroad Commission to grant franchises. I fail to see how the granting of a franchise by the State Railroad Commission is going to extend railways into the suburban territory. That is a matter of economics and finance, as stated by Major Kirkbride and Mr. Whitnall. The trouble with this proposition is this: Exclusive power is conferred upon the Railroad Commission. and the Railroad Commission has, first, the right to prescribe the terms and conditions of those franchises that shall be exercised in our municipalities, and when they prescribe those terms and conditions, there may be no terms or conditions about the repair of our streets and paving between and alongside the tracks - Major Kirkbride has just pointed out that the Legislature has repealed that section of the Code. And it is imperative upon us to see that when the franchise is granted by the municipality, those terms and conditions are contained in it. So I say that for that reason, and for others that have been stated, we want to retain this power in the municipalities.

City Manager Orbison, of South Pasadena: I would like to ask Mr. Reed one question, Mr. President, inasmuch as he has made a very intensive study of this proposed amendment. If the amendment is passed at the coming November election, would it not be true that all franchises, whether for buses or for street railways, would terminate, and that new franchises would then have to be applied for?

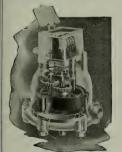
Mr. Reed: No.

Mr. Orbison: That is not true?

Mr. Reed: No.

Mr. Orbison: In other words, you contend that the Railroad Commission would have no power to regulate the franchises that are now in existence, granted by any municipality whatsoever?

EMPIRE WATER METERS



OSCILLATING PISTON TYPE 5/8" to 6"

Tested and proved by over thirty years of unsurpassed service.

Never equaled for sustained accuracy and low cost of maintenance.

The best water measuring device procurable anywhere at any price.

Send for illustrated descriptive catalogue.

NATIONAL METER COMPANY

LOS ANGELES 251 CENTRAL AVENUE SAN FRANCISCO 141 New Montgomery St.



"It Shall Be Done!"

I T HAS always been a matter of pride with our organization to find a way of applying Gilmore Road Oils, no matter where they are to be used.

To make good, sometimes requires decided resourcefulness, since Gilmore Road Oils must always be "served hot."

A case in point is illustrated by the accompanying photos showing how Gilmore Road Oils were applied in water-proofing the foundations for the grandstand atop the huge embankment at the new Los Angeles Stadium in Exposition Park.

The quality of Gilmore Road Oils must be excellent to make service of this kind worth while.

"AT YOUR SERVICE FOR BETTER ROADS"

A. F. GILMORE COMPANY

Producers, Marketers and Refiners of Petroleum 700 Van Nuys Building, Los Angeles, Calif.

New Method of Applying Asphaltic Coating to Water Pipe Discovered

Asphaltum has long been used as a protective coating for water pipe as well as for surfacing of roads.

But it has apparently never occurred to anyone that the method of applying the asphaltum to roads might be employed to good advantage for the other purpose until a striking innovation was authorized recently by Thomas Brooks, assistant superintendent in the Los Angeles water department, in charge of all pipe construction. By it he probably has revolutionized methods for coating

He placed an order with the A. F. Gilmore Company, of Los Angeles, for enough asphaltum to cover 1,500 feet of fourteen-inch conduit near the corner of La Brea and Third Streets, Los Angeles, the asphaltum to be applied by the Gilmore Company with the same trucks which this concern has employed for years in applying its road oils to literally thousands of miles of western highways.

It was a decidedly novel departure

for the Gilmore service department, but the demand was met to Mr. Brooks' complete satisfaction. Three men sprayed the full 1,500 feet of pipe within seven hours. This was one-third the time that would have been required had the customary method of applying the asphaltum by hand with brushes been employed.

The speed record established was not the only advantage, according to Mr. Brooks. It was found that the asphaltum, chilled immediately by close contact with the cold water running through the pipe, hardened in a much more smooth uniform coating than when applied with brushes. It varied but little from an average thickness of five-sixteenths of an inch.

Officials of the A. F. Gilmore Company were highly elated with the success of the experiment. It has opened up a new field for this company's products and service, both of which have established a high standing in western road-building circles.

WE SOLICIT MUNICIPAL ORDERS FOR



VITRIFIED CLAY SEWER PIPE AND FERGUSON SEGMENT SEWER BLOCKS

PACIFIC CLAY PRODUCTS COMPANY



LOS ANGELES, CALIFORNIA

FIRE HOSE

The GUTTA PERCHA & RUBBER MFG. CO.

34 FREMONT ST., SAN FRANCISCO, CAL.

Continued trom page se

is the extent to which these utility companies, with the proceeds of the public service, gather into their fold, whenever a fight is on, the leading lawvers in every town-ex-judges, excommissioners and ex-governors are preferred. I think it is safe to say that after they leave office, ten men are employed by the public service companies to fight against the public to one who is employed on the public side. Three billion dollars a year is a lot of money and it takes only a small percentage of it to make a great many able and honorable public servants change their minds.

Hired Imagination

Out of the depths of engineering and economic imagination bright fancies are conjured up to make property appear where it is not. The sight of money begets concepts of value that

would seem weird to minds not affected by the same stimulant. With all their money, the utilities do not always have to pay the men who are working for them. I would say that all of the expert work on the utilities' side and about two-thirds of the expert work nominally on the public side is done by men who have the utilities' point of view. Valuation chaos gets deeper from year to The subsidizing of privatemindedness has reached such a pass that a technical man with ability seems like a fish out of water unless he is representing some private interest in opposition to the city or the State. Even many of the teachers in our great universities, themselves paid by the State, have been organized into a sort of auxiliary educational service to lend professional dignity to the intellectual vagaries laid before the commission or the court in every valuation pro-

The Calco Automatic Drainage Gate

Used With Rust-Resisting "Armco" Corrugated Pipe,



affords an effective and convenient means for draining streets and roads into nearby ditches, canals or streams, even though the water levels in these channels sometimes become higher than the gutters. When this happens the automatic valve tightly closes and prevents back flow.

SEND FOR COMPLETE DESCRIPTIVE LITERATURE

CALIFORNIA CORRUGATED CULVERT COMPANY

LOS ANGELES

WEST BERKELEY

ceeding, and to teach the young men in college that scientific thinking is always on the side of the three billion dollars How pitiful and how tragic it is for a democracy to be educating its young men in contempt for itself. How doubly dangerous to the future of democracy to entrust the performance of public functions to men who do not believe in public service.

Co-operation Is Impossible

I am for Municipal Ownership because co-operation between governmental agencies and the utilities under private ownership is impossible, except on the basis of the surrender of the public interest. You are likely to hear every Chamber of Commerce shouting for co-operation and decrying the attitude of hostility often shown by municipal authorities toward the public service corporations operating locally. But every

time a city goes into conference without a big club, it throws its case away. This is particularly true in all matters affecting valuation. The companies have so tied their own hands with the bonds they have issued, the contracts they have made and the stock they have sold that they cannot voluntarily get down to a basis that is just to the public. When the city officials go into conference with them, it is not with men who are free to negotiate on a basis of fairness and justice, but with mere dummies whose minds are made up for them in advance by the invisible forces in the centers of finance that control their securities. Ordinarily it is either a futile or a fatal thing even to open negotiations with these utilities for a voluntary settlement of the valuation for any purpose. They have sold the city in advance and given such title as they could, and the only basis

PIPE TANKS **CULVERTS**

For PERMANENCY use STEEL For OUALITY buy "WESTERN"

We furnish Pipe from 1-16" to 1" thick in any diameter. WESTERN makes STEEL TANKS for all purposes. Designed, Fabricated, Erected anywhere on the Pacific Coast,

WESTERN CORRUGATED CULVERTS will give service heretofore unknown, as WESTERN CULVERT METAL is of unequaled rust-resisting, You will find nothing but "WESTERN" Culverts non-corrosive Quality. under the State Highways.

Let Us Figure Your Specifications

Western Pipe & Steel Co. of Cal.

444 Market Street SAN FRANCISCO

LOS ANGELES

TAFT

BAKERSFIELD

1758 N. Broadway

of negotiation that they can recognize is ransom.

I recognize the inherent evils of competition in public utilities—principally over-development and economic waste. Yet is it not a strange thing that in the street railway business and in the electric lighting and power business, practically every important city that has achieved Municipal Ownership has made progress only through the process of competition.

They say that a cat has nine lives. That is not a circumstance to the number of lives in public utility franchises. These curious animals have been known to live for fifteen years after they were pronounced dead by the head surgeons at Washington and long after they had been buried by an avalanche of votes.

A Community Policy

I favor Municipal Ownership, not as something easy to achieve and sure to succeed under any and all conditions. Merely throwing the subways at the Mayor's head will not insure the perpetuation of the five-cent fare in New York, or guarantee everybody a seat at the rush hour. Municipal Ownership is a vasy, immensely difficult and immensely important program. American cities are perishing for lack of a definite community policy. Private ownership is no policy at all; it is a mere shirking of civic responsibility. A city that is not ready for Municipal Ownership should get ready. I hate a town that has no courage. I despise a community that does not know enough to attend to its own business. In my opinion public utility service is municipal business



TRIDENT METERS FOR ALL SERVICES

Split Case Meters for Warm Climates
C. I. Breakable Frost Bottoms for Cold Climates
Hot Water and Oil Meters. Crest Meters for Large Flows
Compound Meters for all streams. Large and Small

TRIDENT DISC

Sold 158,000 in 1921

A record unsurpassed in the history of

MANUFACTURED BY

NEPTUNE METER CO.

NEW YORK

PORTLAND, SEATTLE, SPOKANE, SAN DIEGO

LOS ANGELES OFFICE AND WAREHOUSE
70! East Third Street



TRIDENT CREST
SAN FRANCISCO OFFICE

BAN FRANCISCO

Pacific Municipalities AND COUNTIES

A Monthly Review of Municipal Problems and Civic Improvements



CORONADO FROM THE AIR-CORONADO TENT CITY IN THE FOREGROUND

LEADING ARTICLES IN THIS ISSUE

WHY YOU SHOULD PLAN YOUR VACATION FOR CORONADO 123

GETTING RESULTS IN CITY PLANNING

Publication Office Pacific Building, San Francisco, Cal.

Single Copy 25 Cents



OREGON STATE
HIGHWAY A: Jackson Hat Springs, Juckson Load in 1914
Photographed 1922.
This is the coldest
Label in July
payment in Oregon
July
payment in Oregon
phaltic Concrete Surface (Topeka). Constructed by Clurk
Henery Construction
Co. Condition excellent
with little mainte-



480% in Four Years

During 1922, there were 48,000,000 square feet of asphaltic concrete base and surface pavement built in the Pacific Coast Stites. This was an increase of 480% over 1919, during which year approximately 10,000,000 square feet of asphaltic concrete base and surface was laid in the same territory.

What does it mean? It means that the service given by the asphaltic concrete highways built ten, twenty and nearly thirty years ago has so impressed highway construction engineers, that this type of highway construction is steadily gaining in favor.

Asphaltic concrete pavements stand up in dry weather and wet, and under the severe stresses of heavy and fast traffic. Their first cost is reasonable, they may be constructed with a minimum interruption of traffic, and their maintenance cost is negligible.

STANDARD OIL COMPANY
(CALIFORNIA)

Sor DURABILITY

Pacific Municipalities

AND COUNTIES

OFFICIAL ORGAN OF THE LEAGUE OF CALIFORNIA MUNICIPALITIES Entered as second-class matter March 22, 1913, at the Post Office at San Francisco, California, under the act of March 3, 1879.

10	DL. XXXVII TWENTY-SIXTH YEAR No. 4
	TORS H. A. MASON and Wm. J. LOCKE torial and Business Office Fifth Floor, Pacific Building, San Francisco
4	Address all Communications to "PACIFIC MUNICIPALITIES," Pacific Building San Francisco, California
	APRIL, 1923
f i	NOTICE—Every city belonging to the League of California Municipalities is entitled to a copy this magazine for each of its officials without extra charge. If not received kindly notify the retary.
Name of Street	A. Carlisie & Co., Printers, San Francisco
	CONTENTS
VI	HY YOU SHOULD PLAN YOUR VACATION FOR CORONADO 123
·Ι	TTSBURGH SETTING EXAMPLE IN TAX LEGISLATION 124
GE	ETTING RESULTS IN CITY PLANNING By Charles A. Cheney, of Long Beach
C	RTLAND CEMENT PRICES By George M. Nelson, C. E
S	PHALTIC CONCRETE ROADS IN CALIFORNIA By F. E. Eastman
CC	ONCLUSIONS OF THE PENNSYLVANIA HIGHWAY CONFERENCE

DISCUSSION AT PALO ALTO OF THE PROPOSITION TO DEPRIVE CITIES OF THEIR CONTROL OVER STREET RAILWAY FRAN-

CHISES. (Continued from the March issue).

LEAGUE OF CALIFORNIA MUNICIPALITIES

Organized 1897

Affiliated with the Bureau of Municipal Reference, University of California

OFFICERS

Proadlent, FRANK C. MERIGIPP, Assortint City Clerk of Oakland
First Vine-Presaded, FREED C. WHEELEN, City Convenient of loss Angeles
Secretary-Treasurer, H. A. MASUN, Rend and Ordenness Expect of the City of San Francisco
Executive Secretary, WM. J. LOCKE

Official Printers, A. Carliste & Co., San Francisco
Official Printers, A. Carliste & Co., San Francisco

INFORMATION BUREAU

The League of California Municipalities maintains in connection with the Secretary's Office, a Bureau for furnishing city and town officials with information on municipal affairs, and loaning copies of new ordinances and specifications. Officials are urged to make a free use of this Bureau. Kindly send a self-addressed stamped envelope in all cases.

Members of the California League of Municipalities

Alameda	Covina	Jackson	Orange	San Rafael
Albany	Corte Madera	Kennett	Orland	Santa Ana
Alhambra	Crescent City	King City	Oroville	Santa Barbara
Alturas	Culver City	Kingsburg	Oxnard	Santa Clara
Amador City	Daly City	Lakeport	Pacific Grove	Santa Cruz
Anaheim	Davis Delano	Larkspur	Palo Alto	Santa Maria
Angels	Dinuba	La Mesa	Pasadena	Santa Monica
Antioch	Dixon	La Verne	Paso Robles	Santa Monica Santa Paula
Arcadia	Dorris	Lemoore	Patterson	Santa Rosa
Arcata	Dunsmuir	Lindsay	Petaluma	Sausalito
Arroyo Grande	Eagle Rock	Livingston	Piedmont	Sawtelle
Auburn	East San Diego	Livermore	Pinole	Sebastopol
Avalon	El Cajon	Lodi	Pittsburg	Selma
Azusa	El Cerrito	Lompoc	Placerville	Sierra Madre
Bakersfield	Elsinore	Long Beach	Pleasanton	Sisson
Banning	El Segundo	Los Angeles	Plymouth	Soledad
Beaumont	Emeryville	Los Banos	Point Arena	Sonoma
Belvedere	Etna	Los Gatos	Pomona	Sonora
Benicia	Eureka	Loyalton	Porterville	South Pasadena
Berkeley	Exeter	Lynnwood	Potter Valley	South San Francis
Beverly Hills	Fairfield	Madera	Red Bluff	St. Helena
Biggs	Ferndale	Manhattan Beach		Stockton
Bishop	Fillmore	Manteca	Redlands	Suisun
Blythe	Fort Bragg	Maricopa	Redondo Beach	Sutter Creek
Brawley	Fort Jones	Martinez	Redwood City	Sunnyvale
Brea	Fortuna	Marysville	Reedley	Susanville
Burbank	Fowler	Mayfield	Rialto	Taft
Burlingame	Fresno	Merced	Richmond	Tehachapi
Calexico	Fullerton	Mill Valley	Rio Vista	Tracy
Calipatria	Gilroy	Modesto	Riverside	Tulare
Calistoga	Glendale	Monrovia	Roseville	Turlock
Carmel-by-the-Sea		Montague	Ross	Ukiah
Chico	Gridley	Montebello	Sacramento	Upland
	Gustine	Monterey	Salinas	Vacaville
Chowchilla Chula Vista	Hanford	Monterey Park	Sanger	Vallejo
Claremont	Hayward	Morgan Hill	San Anselmo	Ventura
Clovis	Healdsburg	Mountain View	San Bernardino	Venice
Coalinga	Hemet Hercules	Napa National City	San Bruno	Visalia
Colfax	Hermosa Beach	Needles	San Diego	Walnut Creek
Colton	Hollister	Nevada City	San Fernando	Watsonville
Colusa	Holtville		San Francisco	Watts
Concord	Honolulu	Newman Newport Beach	San Gabriel San Juan	Wheatland
Corcoran	Huntington Beach		San Juan San Jose	Whittier
Corning	Huntington Park	Oakdaie	San Jose San Leandro	Willits Willow
Coronado	Hyde Park	Oceanside	San Leandro San Luis Obispo	
Compton	Imperial	Ojai	San Luis Obispo	Yreka Yuba
Сошреод	imperial	Ojai	Dan Marino	1 000

Associate Members-Oregon: Astoria, La Grande

San Mateo

Ontario

Corona

WR

Total - -

Pacific Municipalities

AND COUNTIES

OFFICIAL ORGAN OF THE LEAGUE OF CALIFORNIA MUNICIPALITIES

Entered as second-class matter March 22, 1913, at the Post Office at San Francisco, California, under the Act of March 3, 1879.

WHY YOU SHOULD PLAN YOUR VACATION FOR CORONADO

On September 10th, the opening day of the League Convention, a total celipse of the sun will be visible in Coronado, the Convention City. Although a partial eclipse will be visible from most localities in California, a total eclipse will only be seen from Catalina and the vicinity of Coronado and San Diego.

At 11:32 in the morning a slight indentation, known as the first exterior contact, may be observed on the rim of the moon, nearly 57 degrees to the right of the sun's vertex. The total eclipse begins at about 12:57 at which time the sun disappears from view entirely and stars will be visible. Bright stars in the constellation of Leo with Regulus on the right of the sun and Denebola near the Zenith will be visible. Several planets are also in the vicinity, including Mars which is on the right of the sun. Mercury is on the left of the sun and Saturn a little further away still to the left. Farther still is Jupiter, while Venus will probably be too close to the sun to be observed.

Just before the sun disappears there are several striking and beautiful phenomenas which will be worth traveling many miles to see. One is the appearance of little crescents of light under the trees where the last rays of the sun shine through. These crescents are a sort of "Camera Obscura" effect and the points of the light crescents are just opposite in direction to the points of the last visible crescents of the sun.

Another phenomena is known as "Bailey's Beeds," a series of bright spots apparently on the edge of the moon, caused by the last rays of the sun shining through the irregular mountainous surface of the moon.

The totality lasts three minutes and one second. At 35 seconds past one o'clock the sun appears. This is known as the second interior contact. The crescents on the grass may again be seen, but in an inverted position. The last exterior contact, when the body of the moon finally leaves the sun, takes place at twenty minutes and thirty-four seconds after two o'clock.

At about the time that the first exterior contact takes place, a black cloud will appear from the ocean and travel inland. After the sun re-appears this cloud will return sea-wards.

Scientists from all over the world are expected to observe this phenomenal demonstration by the heavenly bodies, a thing that will not happen again in this particular locality in one hundred thousand years.

Pittsburgh Setting Example in Tax Legislation

By L. H. McGn.t.

"The quickest way to get rid of a bad law," said a prominent statesman once, "is to enforce it."

That's exactly how the "hard boiled" city of Pittsburgh, Pennsylvania got rid of hers.

Up to the year 1913 Pittsburgh had a system of taxation as unequal, as unscientific, and as contrary to sound economic principles as could be found in any city in America. The very things that should be encouraged-business and industry-were discouraged: and the very things that should be discouraged-land speculation and landlandlordism - were distinctly encouraged. Those who used their ground. whether for merchandising manufacturing, residence purposes or what not. were taxed more than those who did not use their ground at all. Large tracts of valuable vacant land within the city limits, tracts deliberately held idle for purpose of speculation were assessed as ordinary "agricultural land" and charged only one-half of the regular tax rate: land occupied by "houses surrounded by trees and shrubbery" regardless of location were assessed merely as "rural" and charged just one-third of the regular tax rate; while land upon which modern structures and modern improvements had been or were being built was charged at the full rate. In fact the man who improved or beautified his property was everywhere punished by higher levies and higher taces, while the man who did nothing, but let his property run to weeds, degenerate into a burial place for dead cats, or become a dumping ground for tin cans and garbage was everywhere

rewarded by lower levies and lower

The result of the topsy-turvy policy of taxation upon the development of the city was bad-very bad. Because of the discrimination against improvement. thrift and enterprise began to lag. And because of the favoritism shown to land speculators, land values rose to prohibitive heights. So high in fact did the price of land rise as a result of the coddling of the vacant lot speculator that it reached, (in 1910) a point averaging over \$19,000 per acre throughout the city-a point that practically prevented new industries and new business from locating within the corporate limits of the town.

But this was not all. The same foolish taxation policy of rewarding speculation and idleness and penalizing thrift and industry was slowly but surely playing havoe in other directions. Landlordism—which always thrives upon a scarcity of houses coupled with high land prices—spread like a cancer; rents rose at an abnormal rate; while home ownership for the majority became more and more difficult. The whole social, economic and industrial life of the city, in fact, suffered from the honest enforcement of its own stupid laws.

But one day the turning point came. Murmurings began to be heard—faintly at first, then louder and louder. The murmurings grew into open protests. Meetings were held. Speakers—a little bolder than the rest—rose and said:

"Our unsound tax policy is crippling the city. We are strangling business and retarding development by penalizing the man who makes an improvement and rewarding the man who makes no improvement. Worse than that, by taxing the enterprising citizen who properly uses his land heavier than the slothful citizen who holds his land idle we are checking construction; forcing up rents to an abnormal height; boosting unnecessarily the cost of living; creating a class of landlords and tenants; and in general destroying the prosperity and the welfare of the whole people. If this goes on for another twenty years our city will be wrecked.

"Let's reverse the process. Let's reward the man who does something useful, and penalize the man who does nothing useful. Let's cut down the taxes on the property owner who builds, improves or develops, and raise the taxes on the property owner who refuses to build, or develop. Then we'll soon have more buildings and finer improvements; business will be encouraged instead of discouraged; land speculation will be knocked on the head; home ownership will increase and we will, within another decade or two, have a city that will be the envy of the entire nation."

It sounded good. It looked right. So with the aid of the mayor, the backing of the business interests, and the approval of the people generally, the saidto-be reactionary and hard-boiled city of Pittsburgh adopted in 1913 what is locally known as the "Graded Tax Law." This law provides that the rate of taxation on buildings and improvements in Pittsburgh, as compared with that on land, shall be reduced 10% for the years 1914 and 1915, and an additional 10% each third year thereafter, until by 1925 and thereafter the tax rate on buildings and improvements will be only 50% of that charged on land.

The law adopted (see Pennsylvania laws of 1913, page 209, No. 147) reads as follows:

Section 1. Be it enacted, etc.

Art. VI. Department of Assessors, They shall classify all real estate in the city in such a manner, and upon such testimony as may be adduced before them, so as to distinguish between buildings on land and the land exclusive of buildings, and to certify to the councils of said city the aggregate valuation of city property subject to taxation. It shall be the duty of said councils, in determining the rate-for the years 1914 and 1915 to assess a tax upon the buildings equal to nine-tenths of the highest rate of tax required for said years: and for the years 1916, 1917 and 1918, to assess a tax upon the buildings equal to eight-tenths of the higher rate of tax required to be assessed for those years: and for the years 1919, 1920 and 1921, to assess a tax upon buildings equal to seven-tenths of the highest rate of tax required to be assessed for those years and for the years 1922, 1923 and 1924 to assess a tax upon buildings equal to six-tenths of the highest rate of tax required to be assessed for those years; and for the year 1925 and for each vear thereafter, to assess a tax upon buildings equal to five-tenths of the highest rate of tax required to be assessed for the year 1925, and for each year thereafter, respectively, so that upon the said classes of real estate of said city there shall, in every year, be two rates of taxation. Approved May 15, 1913.

What has been the result of the enactment of the above law? In the eight years that it has been in force has it been a success?

Yes very much so.

It hasn't yet accomplished, of course, all that its proponents claimed for its but if we may judge the future by the results that have already been secured, it is not unlikely that it will do so within another decade.

The wild speculation in land and the

consequent inflation of ground values that has afflicted other cities during the past eight years has been absent in Pittsburgh since the passage of the Graded Tax Law. Indeed while the value of desirable building lots in other municipalities has been rapidly rising to a point beyond the reach of the average man. the value of the same building lots in Pittsburgh has remained practically stationary and in many instances has even declined. Many large landed estates held intact for several generations, with a fixed "no sale" policy, are now glad, in fact, to sell their lots at reasonable To a man contemplating the building of a home, the erection of a factory, or the establishment of a business of any kind, the price of the land is a big item-a very big item-and so in the matter of land cost alone Pittsburgh already enjoys a moderate advantage over most other large cities. and is destined to enjoy a much greater advantage in the years to come.

The Graded Tax Law, however, is most clearly demonstrated by the stimulation that it has given building operations. There has been no sporadic building boom in Pittsburgh at any time, nevertheless as a result of the policy of rewarding by lower taxes the person who

improves his property, instead of the person who lets it lie idle, the amount of building permits issued in Pittsburgh (per capita of increased population) during the preceding eight years, has greatly exceeded the amount of building permits issued in eighteen of the largest cities in the nation.

These are but some of the outstanding benefits of the Pittsburgh Graded Tax Law. But they are not the only benefits. That the same law by stimulating building and preventing the inflation of land values has already gone a long ways in keeping down rents as compared with rents in other cities, in checking landlordism in multiplying home ownership, and in adding to the business and prosperity of the city, is freely admitted by all in a position to know.

So successful in fact has the Graded Tax Law been in Pittsburgh, and so well is it liked there even by many who were among its bitterest opponents in the beginning, that sentiment is fast developing to reduce still more the taxes on business, thrift and enterprise, as compared with that on land speculation and monopoly, when the 50% limit, as provided in the present law, has been reached.—(American Municipalities.)

The twenty-fifth Annual Convention of the League of California Municipalities will be held at Coronado, September 10th-14th, 1923.

Start making your arrangements to attend NOW

GETTING RESULTS IN CITY PLANNING

By Charles A. Cheney of Long Beach Before the Twenty-fourth Annual Convention of the League of California Municipalities, at Palo Alto, September, 1922

We are very fortunate in California. in some ways, in the progress we have made in city planning work. Due to the efforts of this League of Municipalities and its cooperation with the Legislature, and with the cooperation of certain Chambers of Commerce, we organized, way back in 1914, the State Conference on city planning. Some of you who are here today were at that meeting. We went to the Legislature in 1915, and we got an act through to authorize the establishment of city planning commissions in all the cities of the State. And today there is hardly a city of any importance in California which has not a city planning commission. It is true that a number of those commissions are doing very little work. The reason for that is, generally, the fact that the councils have not provided sufficient appropriations to carry on the work.

In measuring the progress of any city in city planning, there are pretty definite boundaries of the work, indicating what you have to do. Last year at the summer school I summed up in nine items important things that city planning embraces, and they are, briefly, as follows:

First: The establishment of a permanent city planning commission by ordinance. We have some cities that have established planning boards by resolution of the Council, and they are not authorized to make any expenditure of funds, and they have never gotten anywhere. We have some twenty-five or twenty-six cities with permanent planning boards, established by ordinance under the State law or under charter provision, as in one or two cities—Long

Beach and elsewhere—and they have made very definite progress. There are about 165 or 170 cities in the United States with city planning boards, and California, with some 30 planning boards has, you see, a large proportion of those in existence. At our National Conference each year, there is reported an increasing number of new cities establishing planning boards and doing regular work.

Probably the most notable results that you can sum up in the total of planning work accomplished and put into effect, are shown by the city of St. Louis. Then the work in Newark, New Jersey, and a number of other eastern cities that have carried through several important items of their work, is to be noted.

I think at this point it ought to be said that, while we have a great deal to be thankful for, for the educational work that Chambers of Commerce have done, there is no doubt about it that the quickest way you can get results in actual city development from city plan is by an official planning board, and not leave it to some committee of the Chamber of Commerce or the local Commerce Club, or some other organization—a city club, for instance—to try to reach those things that must be done officially to get anywhere.

The first item of work for a city planning commission is, to my mind, the establishment of a comprehensive zone ordinance. It is not necessary any more to explain what a zone ordinance is. Four or five years ago only, there were very few cities that really had had much experience with zoning. Today there are thirty or forty cities in California with some kind of zoning regulations. Most of them are incomplete, piecemeal, perhaps only protecting a few blocks. But we have several cities here with complete zoning ordinances-there are Alameda, Palo Alto, and Long Beach in that category, that is, they have not only regulated the use of buildings in certain blocks, but the heights of buildings and the area of a lot that can be covered. And those three things are absolutely essential in order to give complete protection to any neighborhood or any class of use.

Other cities, notably San Francisco and Los Angeles, have use and districting, and Pasadena has a use an height ordinance, a fairly good ordinance, but defective in the matter of regulation of area requirement. Only the other day I had a letter from the city manager of Pasadena, telling of the difficulties they are having there by reason of the lack of area requirement, and asking how we had handled it in Long Beach.

In some cities in the East, you will find that they have established separate zoning commissions. But that is inadvisable in any city of less than a million people. Because a separate zoning commission merely does a piece of city planning work, and it does not jibe very well, as a general thing, with the general city plan and zoning or the establishment of the districts where business and residences and industry are to be, and protective regulations to help them agree and that must be done as a foundation before you can lav out a practical plan of the best way to serve those cities to properly provide for railroad facilities, parks and playgrounds, areas for the residential district, and so on.

The third point and the second item of the work is the establishment of a comprehensive major traffic street plan. No city in California has yet gotten that far, although in Long Beach there has been a report of a major street plan presented to the Commission, which is now under discussion. We have had piecemeal efforts at street planning, and in one or two cases some very good suggestions. I believe some of these suggestions of the Utility Commission, the Traffic Board in Los Angeles, are coming to the point of developing parts. at least, of a major street plan. The efforts of the Regional Planning Conference in the Los Angeles metropolitan area are very fine in that direction. But they have not arrived yet. we have in St. Louis and in Cleveland and in Portland, complete major traffic street plans, adopted by the city planning commissions, after a year or two of careful research and providing a program of where the main leads, 80 feet, 100 feet, 150 feet wide could be laid out in the future, and knowing which should be tried to be put into effect this year and which next year, and so on for a program of years,-leading up to various bridges, the unification of rail lines, and other things that must be done to complete a major street plan.

We have several methods of putting that major street plan into effect, the solving of traffic problems. There can be no question in this city, with so many automobiles, and with congestion growing so rapidly down town in every city. even the small cities, -and the congestion at certain points is tremendous. and we have got to have diverting traffic routes to take the through hauling out of the center of the city, away from the center of the city, diverting it around it in a way that will allow our purchasing power, or people in automobiles who go down town to shop, to get at the shopping districts. There is no need of having anybody much but the shoppers going into the shopping district-the shoppers and the deliveries from the stores in those districts. It is not only easier to arrange for this diversion, but it is dangerous and it is wrong to allow the commercial hauling from the factories to other factory districts and to freight depots to plug up the main arteries, and the same is true of the people who want to pass from one city or town to another city or town. They should not be allowed to clutter up the business centers. The business men are coming to understand that, and they are beginning to demand the large commercial concerns are, in these days, and I mean by that the large stores, a scientific readjustment of our traffic handling which will permit the people that need to get to the stores, to get there. That is what is meant by a major traffic street plan as it affects the central area of the city.

On the other hand, the city planning commissions have been by law given, in this state and many other states now, the right to pass new subdivision plans for rapidly-growing areas on the edge of the city. If you have a plan of the whole city laid out for 20 years in advance just as does the telephone company, you will act wisely-you know the telephone company has a fundamental survey plan made out 20 years in advance of their main conduits and switchboards. and they are ordered in advance. Their bond issues are laid out in advance, and they are financed complete and ready to give service at your corner when you are ready to hook up with a telephone now or five years from now, and careful estimates are made just as actuarial work is done for an insurance company. Similar efforts can be made by city planning commissions, and it takes proper technical help to do it, in the direction of working out where we are going to need a certain width of roadway 5, 10 or 20 years from now. Matters regarding extensions of streets and new streets, particularly out into the outlying areas, are most essential in rapidly-growing districts such as we have in California.

Right in the Los Angeles metropolitan area, we are in a frightful state right now, for the lack of a plan, the connecting links of which we can require the new subdivisions to stick to, to conform to, There is no doubt about it that every new subdivider, if he has five acres of land, or any quantity above five acres, should be required to give his proportion of the major traffic street work. if it should go through. We have had several examples here. Mr. Osborne, of the Traffic Commission, could state a few, I know, with which we are wrestling at this moment. Out at Long Beach, we have practically only one main lead east and west, and only one main lead north and south. So we have practically to have for a city of 100,000 people looking forward to a metropolitan area of nearly a million people. There ought to be five or six main arteries in each direction, north, west, and east, and the major street plan, which is now in the making in Long Beach, and which comprehends and says where those groups might be settled on now, is a guide to subdividers, even if they are three miles outside of the city, that if you put a 100 street diagonally over here or through here, parallel to or radiating from other main leads, which will hook up with existing streets, the Commission or City Council will require the next fellow to do the same thing.

I want to say that the subdividers are eager to do it, but there has been no plan, practically no scheme of carrying through main leads. Unfortunately, subdivisions are put on hit and miss, they are not always just the next piece to one which is already subdivided, but somebody will jump out two or three or

four miles and put a piece on, because of the necessity of selling it right away, and the intervening land is still held in agricultural use.

So that a comprehensive manor street plan, similar to that of Portland, St. Louis, or Cleveland, worked out by the City Planning Commission, with due regard and plan for the future, is the third important item in city planning.

I received just two days ago from Str Louis a report. They had adopted their major street plan in 1917, and they sent out an annual report. That just received is for the fiscal year ending in June, showing that they had under ordinance some fifteen or twenty miles of widenings and openings of new street—100 feet wide, 80 feet wide,—that needed traffic links inside the city limits, to form a major street plan. Practically as much more mileage that had already been completed since the 1917 program was adopted.

That was a wonderful accomplishment in five years. St. Louis is gaining new industries at an enormous rate, because they have completed their zoning. Some years ago, about 1918, they set aside industrial zones, where, on one side of the city, industry could go in and be safe, and then they proceeded immediately to link up with traffic hauling streets, leading into the major street plan which they had, in all directions to the most necessary parts of the town by the most direct routes.

The fourth point, which is equally important, and one that has not been taken up to a great extent in California, is the unification of rail lines and terminals. Los Angeles has, with the aid of the State Railroad Commission, gone further than any other city on the coast, in getting a unified terminal plan, worked out by the City Council and the Railroad Commission, adopted by both and ordered by the Railroad Com-

mission. It is true that the railroads have gone to every legal method possible to stay the execution of that plan. But it was a very definite accomplishment for the City of Los Angeles to have secured a scheme of common terminal facilities agreed on by the city and the state, and order its being done by the railroads. We will have a decision on that in one or two, perhaps maybe three, vears, in the courts. It will have to be settled in the courts, of course. They will have to have out this fight as to whether we can go on having railroads running parallel and continuous pieshaped pieces through our cities, eliminating the grade crossing by leaving, as they have done in Chicago and other eastern cities, valleys in between that are ruined property-just miles of them. Los Angeles foresaw that, and foresaw the necessity for eliminating grade crossings, and it was a great piece of work, a great accomplishment, a great accomplishment to have gotten the work carried to the point to which it has been carried. And if the courts sustain their action, as I am rather led to believe they will, the other cities of the state will have a precedent to work on. In Long Beach, the city has succeeded in getting an agreement with the Union Pacific to take its tracks off Ocean Avenue at the front, and an alternate plan has already been agreed upon by the city, to be provided by it in lieu of the piece given up-divert the railroads around the back of the city to the industrial district. That is a definite accomplishment.

In one or two or three cities in California, we have had similar readjustments. But such conditions as we have in Stockton and some other cities, of three railroads on the same street going down to the harbor or industrial district, is ruinous, it is dangerous, and it is financially unsound. There has to be a common readjustment, so that all the rail lines in the city are common usage tracks, and let the railroads outside the city limits hook up at the city limits to that common usage system, and pay their proportion. The old idea that, because the Southern Pacific, or some other railroad, got in there first, that they own the city, that it is their meat, and that they are thereby privileged to prey on the industries and the people there, is no longer sound, no longer held sound by even the railroad executives themselves.

We had a committee of our National Conference, of which I was a member three years ago, in which the chief engineer of the New York Central and the chief engineer of New York City two other railroad and gineering members were on the committee, and the committee got out a national report in which we found that the railroad executives, on the whole, appreciated the dilemma that we are in in our cities regarding these competing lines, similar to the situation that you have just put over here in San Jose, where a railroad had to go completely around the city in order to get into the industrial district, because the Southern Pacific was there first and had sewed up practically the industrial district. In Fresno we found five years ago in our city planning investigation that a shipper had to maintain warehouse on two lines. If an owner owned a warehouse on one line, he would not get any cars. We regulate rates, the rates have to be the same, but when you have got a perishable product, you have to have the cars and have them quick, and unless you are also on competing lines that might give you cars in Fresno, we found the shipper was at the mercy of the road, and that where a man had access to both roads, he had a chance to get cars very much more quickly than did the

man tied to one road. We who are at work for cities as city officials, or who work in commercial development, all have to recognize those facts. There is no use in trying to evade them. And a common system of rail unification can be agreed upon, can be worked out. with competent engineering help, by a city, that is, with the aid of the Railroad Commission as we have it formed in California, and you can get splendid help from them, you can get an order from them, and the Interstate Commerce Commission is in a position now to help under the new law, and they will help, in this direction. Some way has to be found in every city to make a common path for the railroads, and they have to make them stick to it and not allow them to cut up these new districts. And we are having the same problem in the Santa Fe trying to get to the harbor in Los Angeles. The Santa Fe ought to be allowed to get to the harbor in Los Angeles, without building another mile of track, because there is enough trackage existing of transcontinental rail lines there. But as it is, they have got to go and build 25 or 30 miles of track, in order to get into a district already partially served by a net-work of lines, in order to be able to get some of the business, and the shippers down there have got to pay for their coming in there, in order to be relieved of their bondage to the other road. That is one of the most important and difficult problems facing us today in our cities, and there has to date been very little discussion of it.

In connection with the unification of rail lines, the extension of rapid transit lines, and of course the spur trackage to the harbor and industrial districts, comes in as a secondary, or perhaps I should say a matter of equal importance. St. Louis is the only city which has worked out a complete rapid transit

expansion that I know of. Their city planning commission has really gone pretty far in the breadth and the scope of the work that has been covered in the last five or six years.

The fifth item would be an officially established park commission, as they have in Boston, Kansas City, or Tacoma, where the budget is independent of politics in the City Council, and jurisdiction goes outside as well as inside the city limits; and also having under the park commission a comprehensive park and recreation boulevard system plan, which should be worked out with the co-operation of the city planning commission, of course, without regard to the zoning, the major traffic street plan, and so on.

We have park commissions in California. I believe in the city manager form of government. My observation of the cities up and down the coast is that it is the most successful step we have taken in governmental development up to the present time. But one of the defects of the city manager plan and of the commission form of government, which are so generally in use in the coast cities, is that park boards were eliminated in most cities that adoped the commission form of government. 1913, the city of Portland adopted the commission form of government, and dropped all its past commissions. A hue and cry was raised, to do away with so many bodies. Right from that moment, parks ceased to grow to any appreciable extent, or in any particular development. I found that true in almost every other city that has not a group of disinterested citizens nursing the park system. It is almost impossible for any city official, no matter how earnest or how enthusiastic he may be, to secure the gift of park lands, to nurse the continuous planting and careful landscaping necessary. It seems to have failed everywhere, except in those cities which, either by charter or by latter form, which is almost as good, an ordinance adopted by the city commission, as in Berkeley, where they did not have a park commission when they started, but added it by ordinance later, ordinance of the council, and in such communities they are developing real park systems.

But a city park board should be able to go out beyond the city limits. In Tacoma, we have a metropolitan park board, which has done more than any other on the coast that I have been able to find a record of. It has jurisdiction over a park district about three or four times the size of the city of Tacoma as it exists within the city limits, and can acquire, before the lands get too high, out of reach, those areas of land that a park system should include.

We are confronted, in our rapidly-growing cities, such as Long Beach and other southern California cities, and such as Oakland and the cities up here around the Bay that are growing so fast, with the fact that we are too slow about acquiring our park lands and our playgrounds. Losing sight of that fact, we eventually have to pay enormous sums for the land that, perhaps only five years ago, we could have bought for a very small amount. And the bond issue seems too great.

Minneapolis, which has made a tremendous record for its parks, has just one thing, I think, to thank for its success, and that is the fact that somebody had the foresight to provide that a park board should be appointed and the mayor, or whoever it was who should appoint that board, picked up four or five of the most wealthy citizens of the city, men who could give their time to nursing the system, and they went around among their wealthy friends, these members of this park board did, one of whom now lives in Riverside, I believe, for the

last few years, but who was responsible for beginning most of the wonderful Minneapolis system-he went around to his wealthy friends and got them to agree to leave money to the park board with which to buy land. It takes a long number of years to do that. Mr. A. L. White, of Spokane, on the park commission there, who made such a marvelous record through eleven years there, did the same thing. He got the greatest landscape man in the United States and made a complete park and boulevard system, where the boulevards are 200 to 400 feet wide, as they are in eastern cities, not traffic boulevards, as they are miscalled out here. Mr. White, with that plan, which he hid away in his desk, went out and got a piece given here and a piece given there, and, being a very unusually active promoter, actually secured 31 miles of donations of parkways, 150 to 300 feet wide, and in some places more-31 miles of donations in ten years. That came from having a plan that was continuous. The city of Spokane, a city of 100,000 people, has had park bond issues up to about a million dollars total today for the acquirement of land. The rest of their lands they have secured by gift.

We must adopt some such system here, if we are going to have park systems comparable to these cities of the East. Unfortunately in California there is no city yet that has a park system, a complete park system, comparable to anything such as, for instance, Kansas City has done, or Minneapolis. Some one or two cities here have tried it. It is all very well to have in Los Angeles Griffith Park, with 3,800 or 4,000 acres, the biggest park in the state. But it is one park, and it is on the side of the city where the rich people all live, just as Golden Gate Park is in San Francisco. We want a park system that is equally well distributed on the poor side of the city as well as the rich side. And, great as has been the achievement in San Francisco of reclaiming Golden Gate Park, which is one of the great achievements of the world, it is only one park, and it is a long distance off from the poor man's side of the city.

As a sixth item of the city plan, there should be a housing code, such as they have in Berkeley and in Portland or Minneapolis, which, in addition to the building code and the zoning ordinance, supplements the minimum requirements of the State Housing Law, in other words, requires light and air, establishes sizes of yards and courts, in addition to the provisions of the state law, which is a very poor minimum, by the way, Some people, notably some of the builders, will tell you that the California State Housing Act is a most unlawful act, and requires the most light and air of any place in the country. That is not true. We used to be one of the few states that had a state housing code. Today that is not true. In the eastern cities, many of them by state law do not allow any dwelling or tenement house to cover more than 65% of an interior lot, and our state law is 75% and 90% on corners. We want state housing codes to say that the wonderful. the pleasant and attractive scheme of having houses far apart, and lots of light and air and sunshine such as we have in this state, shall be maintained. But unfortunately, I find in Long Beach, in Berkeley, and in other cities, we have taken an actual estimate and simply made a survey of the actual growth of the city, and the tendency among the new buildings is to have a greater proportion of flats and apartments scattered throughout the single family dwelling districts. It is all right to have flats and apartments in certain districts, but if you want to maintain home ownership, which, after all, is the backbone of the

nation, and which is the thing we have got to account on for building up sound citizenship and for the stability of labor and labor conditions, we must look out for the light and air conditions, the housing code provisions.

In Berkeley, since 1915 or 1914, there has been a fairly good housing code, supplementing the state law and providing for living conditions in Berkeley which will make up permanently a city of that kind, and not allow it to become a city of flats and apartments, as San Francisco has largely been.

At the same time, in connection with the housing situation, it is important for a city to develop housing agencies, or building agencies, that will finance the building of small homes on terms like rent, say on ten years or fifteen years terms, 10% down and 1% a month, an arrangement with which some of you are familiar, which pays it in 11 years-that is about the best we have done in California. In the eastern cities, they are allowing in Akron, Ohio, 15-year terms, second mortgages run for 15 years. And our Chamber of Commerce men here particularly should get busy, seeing that that kind of a system of financing housing in this state is made available as soon as possible. It is just as much a part of our city building as it is to provide good

The seventh part of a comprehensive plan is the recreational system. And, from observations made in many parts of the country, in conference with recreation Commissioners, and the Recreation League in New York, I am convinced that the system in Oakland is the best one developed in America today, that of having by charter a recreation commission, which takes charge of the play activities, even in the parks, and locates the playgrounds in parks and near schools, leases the parks and school playgrounds for a nominal

amount and is responsible for breakage. and so on, and which operates 50 school playgrounds the year around in Oakland at a per capita cost for operation less than in any city I have been able to find in the United States. That is a remarkable record. The duplication of having a municipal playground system separate from school playgrounds is one of the greatest wastes we have, and every city official and Chamber of Commerce official knows is the thing that continues to exist perhaps because the school board does not feel that it is justified in it, not feeling that it has money enough to undertake the recreation of the school grounds. But it is possible to bring about the joint employment of the person who has the physical education in the schools and the superintendent of public municipal playgrounds, to combine on a municipal budget so that neither school board budget nor municipal budget is overtaxed, to provide proper recreation, so in Oakland, and likewise in San Francisco, and I believe recently in Los Angeles, the two boards have come together, to do what each could not do alone, eliminating the municipal playground right close by a school. Every time you build a playground separate from a school, you involve a capital expenditure of \$40,000 to \$50,000 before you get through, and it is wasteful. By the expenditure of \$5,000 or \$10,000 additional at the school grounds, you can provide a better recreation center, and help the school board out for the time that the land has to be used during school hours. That is one of the most important economies in city planning that can be brought about, and is being

I will put as the eighth, and near the end of the line, the establishment of civic centers—not at the head of the

(Continued on page 152)

PORTLAND CEMENT PRICES

By George M. Nelson, C. E., Consulting Engineer, San Francisco

A recent publication by Lowell R. Burch, Assistant to the President, Atlas Portland Cement Company, New York, brought out some interesting information as to:

- 1. Current Prices.
- 2. Production Costs.
- 3. Overhead Expenses.
- 4. Per cent. of Profit per barrel of Cement.

The publication is an ex parte statement and as such requires analysis to remove erroneous impressions, not meaning to charge deliberate misstatements.

Current Selling Price F. O. B. Mill

The average 1921 market price f. o. b. mill ex sacks is given at \$1.70 per barrel, and all deductions in the publication are based on that assumption, which was quite correct as to production of the Lehigh Valley, Pa. Cement District which includes New York. The publication assumes, as is a fact, that prices were uniform, i. e., every manufacturer at all times quotes precisely the same price f. o. b. point of use and the same terms and conditions of purchase as every other manufacturer. Purchasers of cement everywhere have come to know those facts, so much so that now-a-days consumers generally do not bother to ask for quotations from more than one dealer or producer. From an article in February issue of "System" by Mr. B. F. Affleck, President of the Universal Portland Cement Company and of the Portland Cement Association the following quotation is interesting:

"We cannot, normally, claim any price advantage over our competitors; nor can we reasonably claim a quality advantage. On a price and quality basis alone, cement competitors are equal. We therefore have to influence buying decisions in some other way."

However during the period covered by the quoted \$1.70 f. o. b. mill price in New York, seventy odd cement companies were under Federal indictment in New York City for combination in restraint of trade. While that important case was pending (it is still active) it is but natural that the cement companies in that locality would not boost their prices current in New York and vicinity. Hence cement producers can make a very readable and, before analysis, apparently convincing publication based on \$1.70 per barrel as "an average" price-"average" as to that limited district.

But how about the west, bearing in mind that the factory costs of production of cement are:

> Labor, Fuel, Explosives, Equipment,

and that those items are for all practical purposes of comparison uniform throughout the United States. We give below the current prices in the western states based on the uniform quoted prices f. o. b. points of use, less freight and sacks.

These prices are all greatly above and in some cases more than \$1.00 per barrel above the Cement Association publication "average" of \$1.70 per barrel f. o. b. mill ex sacks. The difference between those western prices and \$1.70 per barrel can be properly assumed to be profit in excess of the profit of the Lehigh Valley, Pa. District producers.

Instances of the general trend of Portland cement prices in the west for several years are as follows:

STATE	CITY	Year	Price f.o.b. Point of Use	Net f.o.b. Mill Cash Price ex Sacks
Southern Idaho	A	1919	\$3.61	\$1.91
Southern Idaho	В	1921	4.03	2 69
Southern Idaho	C	1922	4.00	2 58
Ltah	Billed to	1919		2.05
Utah	State	1920		2 05
Utah	Road	1921		2.15
Utah	Com.	1922		2 58 2.05 2.05 2.15 2.15
Colorado	. A	1920	4.09	2.44
Colorado	В	1921	3.69	2.47
Colorado	C	1922	3.52	2.16 2.30
Western Montana	A	1919	3.23	2.30
Western Montana		1920	3.98	2.87 2.27
Western Montana	A	1921	3.38	2.27
Western Montana		1922	3.16	2.25 2.70
Western Montana		1922	3.61	2.70
Western Montana	C	1922	3.52	2.40
Western Montana	D	1922		2.35
Oregon		1922	4.38	2.44
Oregon		1921	3.45	2.70 2.97
Oregon.	Portland	1922	3.97	2.97
Washington	Seattle	1922		2.35 2.19 2.45 2.72 2.57 2.43
California		1922		2.19
Arizona		1919	5.00	2.45
Arizona	Phoenix	1920	5.27	2.72
Arizona	Phoenix	1921	4.72	2.57
Arizona	Phoenix	1922	4.10	2.43
New Mexico	Albuquerque	1919		2.07 2.31
New Mexico	Albuquerque	1920		2.31
New Mexico	Albuquerque	1921 1922		2.45 2.25
New Mexico Texas	Albuquerque Western	1922		2.23
	Western	1920		2.47 2.77 2.65
Texas	Western	1922		2 65
Texas	Dallas	1922		1.91
Missouri	St. Louis	1919	2.80	2.13
Missouri	St. Louis	1920	3.90	2.77
Missouri	St. Louis	1921	2.60	2.77 2.07
Missouri		1922	2.75	7 77
Central Alabama	A A	1919	3.60	2 31
Central Alabama		1920	3.60	2.31
Central Alabama	A	1921	4.20	3.45
Central Alabama	, A	1922	3.10	2.39

Profit Per Barrel

In the publication of the Atlas Portland Cement Company referred to where \$1.70 per barrel net cash f. o. b. mill ex sacks is used, it is conceded that at that price the public is paying sixty-six (66) cents per barrel in excess of the

items constituting f. o. b. mill costs. This equals 24½ cents per square yard of Standard Portland Cement Road Construction as recommended by the Portland cement interests (that 8-inch depth 1-1½-3 concrete which yields 2.7 square yards per barrel cement).

The mill cost items are reported as follows:

> Labor. 40 cents Materials. 34 Bag loss. Total. \$1.04

This approximately is 25 cents per square vard profit and overhead amounts to \$2,900.00 per mile of roadway 20 feet wide. Add the additional \$1.00 per barrel - 37 cents per square vard charged in Portland, Oregon, for instance, and we have the stupendous propaganda-overhead-profit of 72 cents per square vard or \$8,350 per mile for cement sale only before a single dollar is expended in any production cost of cement or other materials, labor and contractors profit.

It is to be conceded that under war and post war conditions all of the above items have increased in cost perhaps as much as 50%, but it is worthy of note that prior to those war conditions and incidentally just prior to the organization of the Portland Cement Association. Portland cement had for several years, been regularly selling in the Eastern market as ow as 60 cents per barrel f. o. b. mill ex sacks.

From all of the above analysis of cement prices it is not difficult to see how the Portland cement combine can pay the millions of dollars per annum they are paying in propaganda. In the New York Federal Court case above referred to it was shown from the books of the Portland Cement Association that its direct expenses, though it sells no cement, are over \$1,500,000 per annum to which must be added the similar expenses of the individual associated cement companies.

Statement of the Ownership, Management, Circulation, Etc., Required by the Act of Congress of August 24, 1912

Of PACIFIC MUNICIPALITIES AND COUNTIES, publishly monthly at San Francisco, California for April 1,

State of California, City and County of San Francisco

City and county of San Taran-sov,

Before me, a Notary Public, in and for the State and county aforesaid, personally appeared Wm. J. Locke, who,
having been duly sworn according to law deposes and says that he is the editor of the Pacific Municipalities and Counties
and that the following is, to the best of his knowledge and belief, a true statement of the owner-hip, management and if a daily paper, the circulation, etc., of the aforesaid publication for the date shown in the above caption, required by the
Act of August 3, 1912, embodied in section 445, Potatal Laws and Regulations, printed on the reverse of this form, to wit:

10. August 24, 1914, embodied in section 1-3; Possal Laws and regulations, grinted on the reverse of this 1. That the names and addresses of the publisher, editor, and spirited gettor, and beariness managers are: Publisher, A. Carlisle & Co., 215 Bush Street, San Francisco.

Editors, H. A. Mason and Win J. Looke, Pacific Building, San Francisco.

Managing Editor, Win. J. Looke, Pacific Building, San Francisco.

Business Managers, A. Carlisle & Co., 215 Bush Street, San Francisco.

2. That the owner is: Iff the publication is owned by an individual his name and address, or if owned by more than one individual the name and address of each, should be given below; if the publication is owned by a corporation the name of the corporation and the names and address so of the stockholders owning or holding one per cent or more of the total amount of stock should be given.]
H. A. Mason and Wm. J. Locke, Pacific Building, San Francisco.

That the known bondholders, mortgagees, and other security holders owning or holding 1 per cent or more of total amount of bonds, mortgages, or other securities are. (If there are none, so state.) There are none.

total amount of bonds, mortgages, or other securities are. (If there are none, so state) There are none.

4. That the two paragraphs next above, giving the names of the owners, stockholders, and security holders, if any, contain not only the list of stockholders and security holders as they appear upon the books of the company but also, but also the stockholders and security holders as they appear upon the books of the company but also, but also the stockholders are stockholders, and security holders when the stockholders and security holders who and truster is acting, is given, also that the said two paragraphs contain statements embracing affaint's full knowledge and belief as to the circumstances and conditions under which stockholders and security holders who do not appear upon the books of the company at trusters, hold stock person, association, or corporation has any interest direct or indirect in the said stock, bonds, or other securities than as so stated by him.

That the average number of copies of each issue of this publication sold or distributed, through the mails or otherwise, to paid subscribers during the six months proceding the date shown above is.
 (This information is required from daily publications only.)

WM. J. LOCKE,
(Signature of editor, publisher, business manager, or owner.)
(SEAL) Notary Public in and for the City and County of San Francisco, State of California.

ASPHALTIC CONCRETE ROADS IN

By F. E. EASTMAN

Paper read before the Convention of County Engineers, Sacramento, Calif... March 12, 1923.

The large amounts of money that are being raised and expended by the counties of California for road building purposes not only justify but rather demand that those responsible for their expenditure give careful consideration to the type of pavement selected in order that the most economical investment be made.

A study of pavement economics involves not only the initial cost but the durability, maintenance and ease of repair. An examination into the prices bid throughout California during the last year for the two leading types of pavement shows that there is not a great deal of difference in the initial cost. On the whole, and especially for large sized contracts, asphaltic concrete has proved to be somewhat cheaper to However. the economy of the different pavements will have to be judged very largely on the basis of durability and maintenance

Asphaltic concrete pavements in California have demonstrated records of durability and of low maintenance that are unparalleled by any other type of pavement. There are many asphaltic concrete base and surface pavements that have been down for ten, fifteen and twenty years which are in excellent condition at present, and on which no maintenance has been required.

Main street in Visalia furnishes a fine example of asphaltic concrete durability. This street was paved in 1894, is in excellent condition today, and has required no maintenance whatsoever.

Most of the older pavements were constructed before the counties started building hard surfaced pavements, and were laid in the cities. In considering the best type of pavement for county roads, the argument has been advanced that the records of old city pavements should not be considered. There are, however, no logical reasons for such a statement. In the first place, most of the older asphaltic concrete pavements have been laid on the main streets of the smaller cities and towns throughout California. These streets as a rule carry all the traffic that comes into town on the various highways leading in from the different directions. The resulting concentration of traffic places these streets under a much more severe test than any of the roads leading into town.

This concentration of traffic has been definitely proven by traffic counts that have been conducted in various localities. Take for example, the counts that were conducted by the U. S. Bureau of Roads in their investigation of California Highways. They conducted a count on the San Joaquin Valley route between Los Angeles and Northern California points. The traffic through the City of Fresno was found to be about 5,300 vehicles per day; midway between Fresno and Bakersheld to be about 800 vehicles per day and at Bakersheld to amount to approximately 3,900 vehicles per day.

This increase in traffic through the cities was found to exist all along the route and was observed along the different roads within the state wherever counts were conducted. The fact that



South Sutter Street from Washington Street, looking north. Pavement laid in 1911. Consists of four-inch asphaltic concrete (Warren type) laid in one course. Has carried very heavy traffic, and is in excellent condition today with no maintenance cost. Photographed April, 1922.

asphaltic concrete pavements have successfully withstood the severe test of heavy city traffic for such long periods of time speaks well for their ability to carry the lighter traffic of county roads.

Quite a few of the older city pavements have not been paved from curb to curb and their construction is in every way comparable to that of county highways. It has been pointed out that city streets are curbed and that this is an advantage in their favor, but a comparison of curbed and uncurbed streets fails to show any marked advantage so far as durability of pavement is concerned.

Modesto furnishes an excellent example of this. Seventh and Ninth streets carry the main traffic through town, and are not paved from curb to curb except in the down-town district. The pavements without curbs are in just as good condition as those with.

You gentlemen are probably more or less acquainted with the paving situations in the counties other than your own throughout the State. However, I would like to call your attention to a few facts that you may not have fully realized before.

The first asphaltic concrete county pavement in California was laid by San Joaquin County in 1910. Since then the counties have laid over forty million square feet of asphaltic concrete base and surface pavements, which is the equivalent of 475 miles of 16-foot highway. This type of pavement is being laid by an ever increasing number of counties. Two very significant facts are:

First: Many of the counties which formerly laid other pavements are now laying asphaltic concrete almost exclusively, and—

Second: The counties which have laid asphaltic concrete in the past are continuing to construct pavements of this type.

During 1922 contracts were awarded

and pavements laid by fourteen counties for the construction of over six million square feet of asphaltic concrete base and surface pavements. The counties included are:

> Butte, Contra Costa, Fresno, Los Angeles, Orange, Riverside, Santa Barbara, Stantislaus, San Diego, Santa Clara, Solano, Ventura, Yolo,

During January of this year contracts were awarded by Los Angeles, Merced and Stanislaus Counties for a total of almost two and a half million square feet of asphaltic concrete.

At present Fresno County is the leader in yardages of asphaltic concrete pavements—over twelve million square feet have been laid or contracted for, making a total of 135 miles of the finest highways to be found anywhere.

In May, 1919, the people of Fresno County voted a \$4,800,000 bond issue for the purpose of carrying out an extended paving program. Before deciding on the type of paving the members of the Board of Supervisors made a very thorough and intelligent investigation of pavement types. They devoted practically three months of their time to the study of highway construction. They travelled over and made an inspection of every type of pavement existing in California observing the action of these pavements under varying climatic and soil conditions. The Board officially invited and urged the best known highway engineers in the state representing the State Highway Commission and the Federal Office of Public

Roads to appear before it for the purpose of advising as to the best types of con-

The result of this investigation was a decision to pave the major portion of the roads with asphaltic concrete base and surface. Of the 163 miles of pavements constructed, 133 were of asphaltic concrete. These pavements were laid 5 inches thick in two courses. The average cost was \$20,000 per mile. Fresno County has made a sound investment in these pavements.

Kings County is second to Fresno in mileage of asphaltic concrete pavements. In 1916 contracts were awarded for paving 103 miles with 4-inch asphaltic concrete 16 feet wide. The cost of these pavements was exceedingly low, approximating \$8,000 per mile. The subgrade was very hastily prepared and in many cases drainage was not properly looked after. Much of the pavement was laid on freshly prepared earth. Notwithstanding these unfavorable circumstances and the fact that the pavements are but 4 inches in thickness, the system is in very good condition. A portion of the pavements were laid on marshy land and were not of sufficient thickness to carry the heavy traffic they were called on to support and were reconstructed to a greater thickness. Excluding the reconstruction the maintenance cost has been very low, averaging less than \$10.00 per mile per year.

Yolo County has constructed over 40 miles of 5-inch asphaltic concrete pavements during the last three years. The people are highly satisfied with this type of construction. Mr. A. G. Proctor, County Engineer, says that the pavements are in excellent condition and that nothing has been required whatsoever for maintenance.

Santa Barbara County recently constructed 28 miles of 5-inch asphaltic concrete.

Butte County voted a bond issue of

\$1,800,000 which is being devoted largely to asphaltic concrete road construction. Thirty-three and a half miles of this type of pavement have been laid during the last year.

San Diego County recently awarded a contract for paying 2.2 miles between Nestor and Tijuana with asphaltic concrete. Alternate bids on hydraulic concrete and asphaltic concrete were called for and even though the bid for asphaltic concrete was high the advantages of this type were realized and the contract awarded accordingly.

The lower Sacramento road in San Joaquin County is the oldest county asphaltic concrete pavement in California. This pavement was laid in 1910, For the first five miles out of Stockton the pavement was constructed 15 feet wide and the remaining fifteen miles were but 10 feet in width. This pavement furnished the only paved route to Lodi and Sacramento for several years.

It is built on heavy adobe soil. Adobe is difficult to control when wet. The waterproof qualities of asphaltic concrete prevent the water from percolating through to the sub-grade thereby lessening the danger of failure on this type of sub-grade. This helps to explain the satisfactory service that this 13-year-old 4-inch pavement has rendered. Near Stockton the traffic is so heavy that the pavement had to be widened from 15 to 24 feet. Another short portion of the pavement extending from the Western Pacific Railroad towards Stockton was widened. Outside of the two mentioned parts reconstructed, the actual work in repair of the pavement has amounted to a very small sum. Mr. Quail, the County Surveyor says, in his opinion, that had the same care been exercised in preparing the sub-grade upon which the pavement was constructed as is done in the construction of modern pavements the road would still be in excellent condition. As it is, there are some slight undulations in the surface which are noticeable in riding along the road.

Merced County called for bids on 13.4 miles of pavement in October, 1922. Bids were called on asphaltic concrete for a portion of the distance and hydraulic concrete for the remainder. After the bids were received it was decided to reject them all and call for bids on asphaltic concrete for the entire distance. The new bids were received in January of this year and a contract awarded for the full 13.4 miles of 5-inch asphaltic concrete. This road is to be a portion of the west side highway.

A very notable feature in examining the records of asphaltic concrete pavements laid in the counties is that over 99.9% are of 5-inch or less in thickness. Many years of experience have shown that pavements of this thickness are capable of successfully withstanding the many destructive forces that pavements are subjected to, particularly the destructive force of impact. Recent experimental work conducted by the Standard Oil Company has thrown considerable light into the reasons why pavements of this thickness are so capable of withstanding this force.

Whenever a vehicle delivers a blow to a pavement the energy of the blow is divided into three different parts. A portion of the energy is returned to the vehicle in the form of rebound—a portion is transmitted through the pavement to subgrade and a portion is absorbed in the pavement itself.

The experimental work was conducted with the idea of determining the relative amounts of energy absorbed, transmitted through and returned as rebound.

The experiment conducted was substantially as follows: Sections of pavement of various thickness were securely held in an iron frame. The pavements were held up on edge so that the top and bottom surfaces were vertical. Impact was delivered to the pavement under test



ASPHALTIC CONCRETE LAID ON ALKALI SOIL

Section of Kings County Highway, about one mile south of Guernsey, showing good condition of highway through alkali soil. This pavement, constructed in 1916, is four-inch asphaltic concrete laid in two courses. Topeka type surface. Photograph taken February, 1922.

by means of a steel ball suspended as a pendulum. The ball was pulled back from the pavement and let swing against it. Another steel ball was suspended just in contact with the opposite side or bottom of the pavement. It was found that the ball delivering the impact rebounded from the pavement and that a portion of the shock of impact was transmitted through the pavements to the ball hanging against the bottom causing it to swing out. Measurements of the rebound and of the swing of the ball away from the bottom of the pavement were made for the various thicknesses of the different paving types. The corresponding energies were computed. It was found that the major portion of the energy was absorbed by asphaltic concrete pavements, that some was returned as rebound and that a small part was transmitted through the

This furnishes a practical demonstration of the ability of asphaltic concrete to absorb the shock of impact. These shock absorbing qualities reduce the forces delivered to sub-grade and minimize the danger of sub-grade deformations and consequent failures. It is the shock absorbing qualities coupled together with the great resistance to impact that explain the great durability of relatively thin asphaltic concrete pavements. The semi-rigid qualities insure a constant and uniform support from the sub-grade at all times and prevents the setting up of destructive internal stresses and strains due either to bridging action caused by sub-grade settlement or to expansion and contraction caused by temperature changes.

The question has been raised at different times as to the ability of asphaltic concrete to carry heavy traffic. While the actual weight of traffic carried by the most asphaltic concrete pavements is not known there are a few cases where the amount of traffic carried has been established. The Oakland Paving Company's quarry is located on Macadam street. Oakland. This street was originally paved with a thin oil macadam. In 1914 it was surfaced with 21/2-inch to 3-inch of asphaltic concrete. In the eight years that this pavement has been down over seventeen million tons of traffic have passed over. The traffic consisted essentially of trucks ranging from ten to twelve tons per load. The record of tonnage is taken from the Oakland Paving Company's books. The payement is in excellent condition and no maintenance has been required. This traffic amounts to several times that which passed over the Pittsburgh Test Highway.

A traffic count was recently conducted by the California Automobile Association in the City of Fullerton, in Orange County. It was found that 9,602 tons of traffic moved over the Spadra road in 24 hours. This would amount to approximately 3,000,000 tons per year. The Spadra road was paved with 5-inch asphaltic concrete in 1913 and is in very good condition after nine years of this severe traffic. There are innumerable instances that might be cited where although the exact amount of traffic is not known, asphaltic concrete pavements have successfully carried extremely heavy loads for a period of vears. Such an example is the La Habra-Brea road in Orange County. This road was paved in 1913 with 5 inches of asphaltic concrete. Since that time all the materials used in the operation of the oil field in this district have been trucked over this pavement. It is in excellent condition. The maintenance has been negligible.

There are a great variety of soils in California. Some make excellent subgrades and others, such as adobe, shitting sand and alkali are rather unfavorable Adobe has been mentioned by the California Highway Commission as the cause of a large percentage of the failures on the State Highway System. Asphaltic concrete has been laid on adobe throughout the state with universal success. Stockton is built largely on adobe, Many of the streets are paved with asphaltic concrete and although they have been down for a long period of years they show no signs of failure. The town of Rio Vista is located in an adobe country. The streets are paved with asphaltic concrete in 1914 and although the pavements have been subjected to a very heavy traffic, they have required no attention and are in an excellent state of preservation.

The Middlefield road in San Mateo County is also on adobe. This pavement was laid in 1914, and is in excellent condition presenting a true and even surface.

Dry sand is shifting and unstable and difficult to compact. It is considered an unfavorable subgrade: The City of Hermosa Beach furnishes one of the many examples where asphaltic concrete pavements have been laid successfully on sand. This town has nearly a million square feet of 4½-inch and 5-inch asphaltic concrete pavements constructed on a beach sand subgrade. They were laid in 1910 and have remained in excellent condition.

Many tests and investigations have been conducted on the effect of alkali soils on road building materials. It has been found that those that contained a large percentage of sulphates have a very corrosive action on some paving types. The last Biennial Report of the California Highway Commission contains the following statement:

"Laboratory experiments have been carried on for several years to determine the resistance of asphaltic road materials to alkali. These experiments indicate that where alkali is active by reason of the presence of water, asphaltic roads are less susceptible to alkali damage than is cement concrete."

Extensive experimental tests carried on in the road laboratory of the Standard Oil Company verify these statements. The highway between Dallas and Guernsey in Kings County furnishes an example of the resistance of asphaltic concrete against strong alkali. This pavement shows no ill effects from the alkali after six years of exposure.

There is a more or less prevalent opinion abroad that asphalt pavements are more slippery than other types and that a large number of accidents are due to this source.

In order to get the facts in regard to slipperiness the coefficient of friction between rubber and actual sections of various California pavements was measured. Measurements were made with the pavements dry and under varying degrees of moisture. The non-skid qualities were found to be very nearly the same for the different types of pavement when dry. On subjecting them to slight moisture all became more slippery and in about the same amount. moisture was just sufficient to loosen the dirt and oil coatings on the pavements and the increased slipperiness appeared to be in proportion to the amount of slippery coating on the surface of the pavements rather than to the pavement type itself. Under conditions of heavy rainfall the coatings were washed away and the pavements of all types regained their non-skid qualities.

The reason that asphalt pavements are thought to be more slippery than other types is that city streets are largely paved with asphalt and it is in the cities that traffic is congested and

the necessity for quick stops and sudden swerves are quite frequent. The other paving types are largely confined to highways where driving conditions are not so strenuous.

A record of accidents shows that the number of accidents due to skidding is very small in comparison with those due to other causes, amounting to but 2.4% of all accidents. Over 30% were found to be due to reckless driving and the rest to such causes as confusion, inexperienced handling, lost control, broken steering apparatus, no lights, dazzling lights, intoxication, failure of brakes, traveling unknown road, children and pedestrians stepping directly in front of machines, crossing accidents due to disregard of signals, right of way misunderstanding, and other causes.

Skidding is not so much a matter of the type of pavement, but rather more of the driver. Although these accidents are but a small proportion of the total of accidents, they can be reduced by careful common sense driving.

In closing I would like to call your attention to a few facts of prime importance which I would like to leave with you:

First: The initial cost of asphaltic concrete is reasonable and is, on the average, a little less than that of other payement types.

Second: Asphaltic concrete pavements have demonstrated a durability that is unapproached by any other type of pavement.

Third: Asphaltic concrete has been laid on all types of subgrades including adobe and alkali soils, with universal success.

Fourth: Asphaltic concrete has proven its ability to absorb the expansion and contraction caused by extreme temperature changes, without cracking or buckling. Sixth: Asphaltic concrete pavements are ready for traffic the day after laying. Long aggravating curing periods are

Seventh: Asphaltic concrete has successfully carried extremely large amounts of heavy traffic several times the amount tested over the Pittsburg Test Highway.

Eight: Asphaltic concrete pavements have been laid on the Pacific Coast

since 1894, and there has been a steady increase each year over the previous year. During the year 1918 there were seven and a half million square feet of asphaltic concrete base and surface pavement laid on the Pacific Coast; in 1919, ten million; in 1920, twenty-eight million; 1921, forty million; in 1922, forty-nine million square feet. This steady increase has not been due to a temporary rush to a new and experimental type, but rather to the excellent records demonstrated by a tried and proven pavement.

CONCLUSIONS OF THE PENNSYLVANIA HIGHWAY CONFERENCE

(From Highway News Digest, March 31, 1923.)

As a result of the deliberations of the Highway Conference, the Committee on Conclusions submits the following:

The construction, maintenance, financing, and operation of highways is becoming more and more a question of nation wide transportation and less one of neighborhood convenience. There are two general phases to every problem coming before a state highway department for solution-the business and the technical. A majority of the states have recognized this fact by providing for either engineer commissioners or technically trained engineer executives. We believe this principle is sound fundamentally and urge the state authorities, both executive and legislative, to provide at all times strong engineering control in the administrative and executive work of their state highway departments and engineering supervision of the construction, maintenance and operation of the highway systems.

To this end we urge that these departments be removed from political influences, and that continuity of service be preserved for a sufficient period to insure stabilized policies. In no otherway is it possible to safeguard and protect the interests of the citizen, who is paying for the roads.

State highway departments, with their knowledge of the geography and topography of the states, should determine without legislative or other interference what roads or systems of roads should be constructed and maintained with state funds and should not be governed by legislation as to types and cost of construction.

FINANCE

Every State highway department should be operated under an Annual Budget System.

The cost of building and maintaining adequate systems of highways should be distributed equitably among the sources of highway revenue in proportion to the benefits derived from the improvement.

The permanent features of original construction of highways should be financed on the "pay as you go" plan or from the proceeds of serial bonds, according to the stage of development of the highway systems now existing in the several states.

The policy of requiring the user of the roads to pay for the service received through a license and a gasoline tax is a sound one, and all revenues from such sources should be applied primarily to the maintenance and reconstruction of highways.

CONSTRUCTION

Owing to variations in climate, soil, traffic conditions and available materials, no one standard type of pavement is practical for the country or even for a state.

Granite block, brick and bituminous tops on a concrete foundation, and a concrete pavement may be termed as construction of the first class; the so-called flexible types of pavements may be termed as construction of the second class; and gravel, sand and clay or other top soil roads may be termed as construction of the third class.

MAINTENANCE

Unless adequate maintenance is provided for, initial construction of highways should not be undertaken at all.

The same engineer who builds the road should be held responsible for its upkeep.

TRAFFIC

Each state highway department should establish a traffic bureau to make a highway transport survey in all its phases to determine present and forecast future, traffic conditions, to assist in the selection of the economic road construction.

Efforts should be made, in co-operation with motor vehicle officials, to establish as soon as possible uniform motor vehicle laws and regulations, so that the user of the road may travel under uniform laws wherever he goes. It is highly desirable that a uniform law be enacted by the states of the union regulating the dimensions of motor driven vehicles and the wheel load of such vehicles.

An effort should be made to provide proper standard devices for the protection of the road user and the prevention of accidents and no person should be allowed to operate a motordriven vehicle upon a public highway until such driver has been examined and a license showing competency has been granted.

We believe in the installation of simple, easily followed direction signs.

A more determined effort should be made to promptly eliminate all grade crossings.

Realizing the grave responsibility resting upon the officials charged with the administration of the highways for the safety of the public, we earnestly appeal to the people at large to aid in making these conclusions effective.

Thos. H. MacDonald, Chief, Bureau of Public Roads, U. S. Dept. of Agriculture.

Frederick Stuart Greene.

New York State Highway Commission. Arthur W. Dean, Chief Engineer,

Massachusetts State Highway Commission.

Frank Page, Chairman, North Carolina State Highway Commission.

Paul D. Sargent, Chief Engineer, Maine State Highway Commission.

Clifford Older, Chief Engineer, Illinois State Highway Commission.

H. G. Shirley, Chairman, Virginia State Highway Commission.

Charles J. Bennett, Connecticut State Highway Commissioner.

William H. Connell, Pennsylvania State Asst. State Highway Commissioner.

DISCUSSION AT PALO ALTO

Of the Proposition to Deprive Cities of Their Control Over Street Railway Franchises

(Continued from the March Issue)

Mr. Reed: The amendment reads that the Railroad Commission shall have the power to accept the surrender of all such franchises granted by it and of all such franchises hereafter granted. But they cannot compel the giving up of a franchise already granted.

Mr. Orbison: But they could say to some municipality that was suffering from the lack of transportation, for instance, where bus transportation would be the only relief, at least for the time being, "No, you can't grant it, for the reason that you are going to take some supposed money out of the pocket of the railroad," and therefore deprive the city of the right of that much needed transportation facility.

Mr. Reed: If the Railroad Commission felt that it was important, for the best interests of any community, that a certain line of procedure be followed, just as in the present situation with water companies and electric facilities in certain places, they would have the right, and we maintain that that right would then be granted to a body which has all the information, the ability to gather information, to determine what is the proper course of procedure. Now, this gentleman who was so courteous on the left. Major Kirkbride, suggested the attitude of the Real Estate Association as favoring having paving done by the property owners. I want to say most emphatically that the gentleman has built up a case there entirely without foundation.

The President: You will have some time alloted in which to reply to everything, Mr. Reed.

Mr. Osborne, of the Board of Public Works of Los Angeles: We have been working for three years with the Railroad Commission, presenting cases before them, where the city of Los Angeles was affected. I am absolutely of the opinion that this proposed amendment should not pass, for the reasons that have been stated, and I want to say that it is very strongly my opinion that the matter is very largely an economic one, and not a matter of whether the Railroad Commission has the power to grant franchises or the city. So far as the city is concerned, I can state with a great deal of assurance that they will lose a very valuable right if they are permitted to go to a State body or to a National body.

ADDRESS OF MILTON BRYAN, Esq.
Deputy City Attorney of Los Angeles,
Against the Transportation Franchise
Amendment.

Mr. Bryan: Mr. Chairman and Ladies and Gentlemen: I have not, as have the speakers who have just preceeded me, made a study of this question. I am assuming to discuss this question briefly before you this afternoon, in the belief that it is so simple in its principles and so apparent upon its face as to its motive, and so direct in its relations to the people of the various municipalities of this state, that no consistent or prolonged study is necessary to understand it.

The first speaker has said much with which I heartily concur. He has pictured and defined conditions which no doubt exist in many, if not in most, of the communities of this state. I listened

Quality of Circulation is what Counts In Advertising

If you are interested in reaching the largest possible number of interested buyers for the lowest possible cost, advertise in PACIFIC MUNICIPALITIES Rates on Application

We give our advertisers service

PARAGON
Fire Hose

"Anything less than the best in fire hose is a losing investment."

United States Rubber Co.

EUREKA FIRE HOSE DEPARTMENT 1104 I. N. VAN NUYS BLDG.

LOS ANGELES, CAL.

812 SEABOARD BLDG.
SEATTLE. WASH

attentively to hear him explain to you how and in what manner that situation would be altered through the agency of the proposed amendment to the constitution. If he did explain it, I was so obtuse that I failed to catch it.

Now, he talks about the failure of the extension of interurban and street railways. Such extensions have been rare in recent years. But if he contends that the failure to extend street and interurban railways has been due to the fact that municipalities have controlled the granting of franchises and have arbitrarily refused to permit extensions of street and interurban railways, I take issue with him upon that question, and challenge the statement, if it was intended to be made.

I desire to call the attention of the gentleman who so earnestly desired the extension of street and interurban railways, to the fact that the railways deny that there is any Governmental power that can compel them to extend their lines into new territory. And further, that there has been a decision of the Supreme Court of the State of California, in which that compulsion was undertaken against the Santa Fe Railroad in which that court held that only the stockholders and owners of those roads had the power and authority to say whether new roads and new extensions should be built or not; that the state and its subdivisions may regulate, but neither can enforce the construction of street and interurban railways. It has never been shown by the arguments made here for the measure that, if this authority, which now rests in the municipalities, were transferred to and conferred upon the Railroad Commission. that Commission could or would compel or otherwise induce the construction of railroads, where they are not now being constructed.

If indeterminate franchises would accomplish the purpose which the gentlemen desire, then why not ask, why not propose, the granting of indeterminate franchises, instead of franchises limited to twenty-five years, without taking away from the municipalities the power to grant those franchises? I know of no instance in which a city has refused to permit a street or interurban railway to extend its lines. I find that they are plad to have those lines extended, so as to give additional service to the people of the communities. And, so far as the municipalities desiring to be relieved is concerned, he thinks that they should be glad, indeed, to be relieved of their governmental functions. My fellow citizens, that does not accord with any experience that I have ever had with Governments of any character. I say to you that the principle of this proposed amendment is at variance with the principle of American Government. It is out of harmony with the principles of Jefferson and of Lincoln, Of Jefferson, who said that Governments derived their just powers from the consent of the governed; and of Lincoln, who gave us the principle he expressed so aptly and so wisely, the principle of government of the people, for the people, and by the people.

Now, why should the granting of franchises, which affect a particular

municipality in each case, a franchise to use the streets of that municipality. streets which the citizens of that municipality must pave, must build and maintain-why should that power be wrested from the governmental authority of that community and placed in a district body? The spirit of American government is government by the people, and a democracy seeks to bring government just as near to the people as it is possible and practicable to bring it. I was reminded while Mr. King was talking of proportional representation here, that he might have added in his argument for it that that system of representation would have the effect of bringing government more nearly to the people. The individual is the unit of government in this country. And the nearest to the individual that Government can be brought, the best-and that is the purpose of our forefathers in the establishment of this government.

This measure is a reactionary measure. It seeks to revert in the principle of local self government, to take it away rather than to confer it upon the individuals or community of individuals directly interested.

Let me give you some reasons why the local authorities are better qualified to control the granting of a franchise in their communities than would be the Railroad Commission. In some of the

N. CLARK & SONS

INCORPORATED 1889

Manufacturers of

ARCHITECTURAL TERRA COTTA, PRESSED BRICK
VITRIFIED AND TERRA COTTA PIPE
HOLLOW TILE FIRE PROOFING
FIRE BRICK TILE AND KINDRED CLAY PRODUCTS

WORKS.

Office: 112-116 Natoma St.

WORKS: WEST ALAMEDA

SAN FRANCISCO

cities. I know in the city where I live, the traffic congestion is the most serious problem that confronts the authorities and people. Only a short time ago, it became necessary for the Board of Public Utilities of the City of Los Angeles to refuse to a sister city, the neighboring little city of Glendale, a franchise to operate motor busses over our streets, for the reason that the congestion in that portion of the city and on those streets over which it was proposed to operate those motor buses, was already so great that we could not think of permitting the extra congestion which the granting of that franchise would cause.

All of you attorneys and engineers who have had anything to do with the valuations of railroad properties, know that a franchise is frequently a very material part of the value of the railway property. Who knows so well as the city authorities of a city what a franchise to be granted within that city is worth?

There is another reason that is very important, why the local authorities should control the granting of that franchise, and that is, that, in granting the franchise, they are enabled to lav down the terms and conditions upon which a franchise shall be granted and upon which it shall be operated. The prescribing of those conditions is in itself, of sufficient importance to condemn this amendment. In our city. some of the conditions named are that all letter carriers, police officers, policeman, officers of the fire department, shall have the privilege of getting on a street car or any interurban car within the limits of the city and riding free within those limits, upon the discharge of their official duties. (To be Continued)

LaFrance Hose Clamp Gives Complete Control of the Water Line at Any Point



This handy device, which is carried in the belt as easily as an axe, will save much time and confusion while fighting fire. Even high pressure lines can be shut off at any point without shouting of orders to engineers or hydrant men several hundred feet away. - Its use also prevents the loss of time incidental to tracing a maze of fire lines back to their sources.

MANUFACTURED AND GUARANTEED BY THE WORLD'S LARGEST AND OLDEST
MANUFACTURER OF FIRE EQUIPMENT

AMERICAN AFRANCE FIRE ENGINE COMPANY, INC.

131 NEW MONTGOMERY ST

SAN FRANCISCO, CAL

Are Your Streets Being Improved?

If so then you should consider the advisability of insuring your proceedings, your improvements and your assessment to comply with all the technicalities and intricacies of the law.

Then is the time you want expert advice, forms, bonds and books that agree with the street laws including all amendments.

Years of specializing on this phase of the law enables us to properly and legally assume responsibility for the correct fulfillment of your order.



46 years of continuous service to municipalities is our guarantee.

That's good insurance.

A. CARLISLE & CO.

if outstand team page 11,

list, as some advocates of city planning have been prone to do. It is a great thing, and one of the things that must not be neglected, to have a plan worked out as part of your civic plan, for the grouping at one or more points of civic centers, for administrative buildings, as they have in San Francisco, or a civic center of Arts and Letters, as are building in some other cities. It is a great thing, the cumulative effect of getting your public buildings in one group-something that has a great deal of advantage, both to people in the city, who thereby gain a great deal of civic pride and something about which to center their affections, and also for visitors. Francisco's civic center is heralded all over the world as a great accomplishment. It cost them no more than the building of those buildings separately would have done-probably less. And yet a little foresight in the making of a plan, and in the direction of acquiring an area adequate for the buildings that they needed to build there, has produced that great group.

Cleveland, in the East, was one of the first cities, long before San Francisco, to start a mall, and to build its buildings about in a group, and that is one thing accomplished today. It perhaps does not show up as well as the San Francisco center, because they did not clear up the intervening buildings, that is, they had not done it when I was there in June. But they will probably in the next two or three years.

That kind of grouping, you will see more and more as we go along, because it is the history of the world from the beginning of cities that the people have recognized that if you can get your public buildings in a group, you have something noteworthy that people will come from other parts of the world to see. And the great things in Europe

Are You Equipped To Win Success?

Here is your opportunity to insure against embarraseing errors in spelling, pronunciation, and poor choice of words. Know the meaning of puzzling war terms. Increase your efficiency, which results

WEBSTER'S NEW INTERNATIONAL

DICTIONARY is an all-knowing teacher, a universal question answerer, made to meet your needs. It is in daily use by hundreds of thousands of successful men and women the world over.

400,000 Words. 2700 Pages. 6000 Illustrations. 11,000 Biographical Entries. 30,000 Geographical Subjects. GRAND PRIZE Highest Awards

Panama-Pacific Exposition
REGULAR and INDIA-PAPER Editions.
WRITE for Specimen Pages. FREE Pocket Maps

G. & C. MERRIAM CO., Springfield, Mass. U. S. A.



GRIFFITH COMPANY

Owners of
FAIRCHILD-GILMORE
WILTON CO.

Paving Contractors

Rooms 500-504

Los Angeles Railway Building

Los Angeles

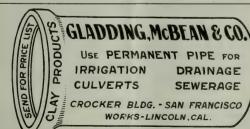
EDWARD GLASS

UNDERWOOD BLDG. SAN FRANCISCO

that are talked about in the successful cities as you pass through them are nothing more than groups of civic centers, built here and there and at different periods, varying from fifty to five hundred years apart, but in the end producing a common, cumulative result.

The last item to which I want to invite vour attention, No. 9, in a complete city plan, is the establishing of an art jury by charter amendment, as in New York City and Philadelphia, where, no matter how absolutely rotten Tammany may be, it can't put up any building, any public building, or use any public money for building, unless the design has been approved by an art jury independent of Tammany, and which has been of a very high quality of membership. That is why the public buildings in New York City, built by Tammany and political-well, I won't say corruption, but by political maneuvering of all kinds, has been held up to a high standard of design that is much more noteworthy than anything we can show on this coast as a whole. Because they had the foresight to get an amendment to the charter of the City of New York, I think about 1895 or 1898, which provided that the Mayor should appoint from certain lists, and it provides the list-he can only appoint one of three nominees appointed by the Municipal Art Society, that is the society that runs the great metropolitan museum in New York, and another group of three named by the Chapter of Architects in New York City, and a sculptor nominated by the National Society of Sculptors. They have one architect, one painter, and one sculptor on this commission, and two laymen, and this commission has the right of absolute veto, under the charter, of any design of any buildings, to say that it is or is not up to a certain standard of excellence.

We have one city in this state which has approached that, and that is Los Angeles, which has a provision in its charter for a municipal art commission. Unfortunately, they have not powers as complete as they have in New York and Philadelphia, In Philadelphia they call it the art jury. I think that is a better name, the Art Jury of Philadelphia, and if you will send for their reports to the Secretary of the Art Jury, you will be astounded to see what they containthey will show you pictures of what are submitted for foundations and bridges and fire houses and municipal buildings, schools, all kinds, and then on the opposite page the design which they got up, insisting on it, and which in many cases comes last. It is not the expenses that gets the results, but it is the holding



it up to a certain standard of design. But if every architect in a city knew that, no matter what piece of municipal work he was doing, it had to be passed on by a jury of competent men, he naturally would be more careful than he would in his desire otherwise, although architects as a profession do their best on the whole.

Now, those nine things, taken together, form a good general measure of the standards and the progress in city building, in any city at the present time. How many can you report as having in your city? There is no city in the country that has complied with all those items vet. St. Louis and one or two other cities are now well on the way to saying, "We have a complete city plan after seven or eight years of most careful research and planning. But we can develop such plans, and it was just the point that Dr. Rastall was making in the talk just before me, that that kind of business methods and business efficiency is going to be required in coming years in all our cities. There is no doubt about it. There is a higher standard of city building being required of all of us. It is just a question of are we going to educate them into saying, "Yes, we are going to get every one of those items and complete the scheme."

Mr. Chairman, I have taken a little more time to thoroughly sum up than I had intended. But I will be glad to answer any questions, if anyone desires to ask questions. Of course, I have just hit the high spots in what I have had to say.

Mr. Blodgett: Do you advocate union depots?

Mr. Cheney: There is no doubt about it that the convenience of the public is greatly advantaged and the respect of the traveling public is greatly gained, by having in any given city a union depot. A year ago, when I left Portland, having attended there the National City Planning Conference, the Mayor asked me to send him a post card or photograph of every union depot that we encountered on the way to Pittsburg and back again. After we crossed the Mississippi River, in fact, before we had

Sacramento
Capital National Bank Bldg.

San Jose Bank of Italy Bldg.

Los Angeles Fay Building

WILLIAM DOLGE & CO.

Certified Public Accountants Municipal Accounting

Audits, Examinations and Special Examinations. Accounting Procedures for Municipal Utilities. Budget Systems Installed

Telephone Sutter 697

369 Pine Street

San Francisco, Cal.

crossed the Missouri River at Omaha, we began to find many union depots in every city of any consequence, pretty nearly. And the demand everywhere is for union depots. And the strange thing is this, that the railroad stations, after a city gets to be about 2,500 people, do not mean a great deal to the business district. The business district tends to move away from the railroad depot towards the purchasing power of the city, which is always away from the depot. The high class residence people, having purchasing power, build their residences away from the depot, and the retail district builds toward them. So the railroad depot, particularly the passenger depot, is a matter of small interest to the retail business district. There were those, I believe, in Los Angeles even, that were misled, I think, into thinking that the location of the union passenger depot would help the business district. I don't think it does.

I don't think any close student of city development believes any more that it does. So, if you can get in your cities a union passenger station, which generally helps you to get one path for all the railroads through the city, which is the most important thing, and some kind of a union vard terminal, where there can be a common L. C. L. depot, you have gained a great deal for your city. It has been the railroads that have fought that, and not the cities. railroads have assiduously cultivated the idea that the individual railroad was the important thing. We know that is no longer true. We know that no matter how important it is to have competing through lines for service, that we have the railroads so regulated, and we are not going to give up that regulation, no matter how you and I believe about regulation or operation of railroads, the world has adopted this system, the country has adopted this system of

EMPIRE WATER METERS



OSCILLATING PISTON TYPE 5/8" to 6"

Tested and proved by over thirty years of unsurpassed service.

Never equaled for sustained accuracy and low cost of maintenance.

The best water measuring device procurable anywhere at any price.

Send for illustrated descriptive catalogue.

NATIONAL METER COMPANY

LOS ANGELES
251 CENTRAL AVENUE

SAN FRANCISCO
141 New Montgomery St.



Angeles, about eight miles west of the center of the city, the University of California has discovered entire skeletons of a large variety of prehistoric animals. Evidently these creatures got too close to the asphalt when it was soft, were caught in its gummy grip and sank beneath the surface before they could tear themselves loose.

The condition of the skeletons gives abundant evidence both of the preservative qualities of asphalt and its great cementing strength.

In the vicinity of this deposit are the oil wells from which the A. F. Gilmore Company obtains a large part of its famous Road Oils. They evidence the same great adhesive power as the natural asphalt in the deposit. Hence their value as binders in the construction of macadam and other types of roads.

At Your Service For Better Roads

Gilmore Products

A. F. GILMORE COMPANY

Road Oils-Fuel Oils Gasoline-Motor Oils 700 Van Nuys Bldg.

GILMORE PETROLEUM CO.

Los Angeles



regulation. And the important thing is now, to get the railroads where they will do the least damage in location and the greatest good in service. And if there were some way, some organizing, unifying agency could be created, some means of getting together between the state and the railroad, which the railroad plans hit all right, but the state never has, as a consequence of which the railroads have not been able heretofore to work out any future scheme that they thought there was any chance of the city following. The city has always been going on as a purely hit and miss thing, in which they take all they can get from the railroad, and leave the other fellow to look for his own salvation. Now we are coming into a new idea of things, for the city to have a plan and to work to a scheme and to demand of the railroads a cooperation, which I have found they are pretty generally glad to have, if there is any way to work it out.

You know the joke about the union depot is that Jay Gould I think, way back in 1889, fought through the Missouri Courts and through the United States Supreme Court, the right of railroads to have a union depot in St. Louis. And those old decisions way

back in the nineties are the things we used—they used to say that the law and the decisions were all against it. In those days people try to obstruct the union depots, because they were afraid of combinations in restraint of trade. Today the shoe is one the other foot, and everywhere in the East you will see it the other way. Last year all the way to our National Conference we passed through numerous union depots through the middle west and in the east.

Of course, this unification of rail lines is not a thing you can work out in a hurry. You have got to start out today for tomorrow, or you won't even get it for tomorrow or five years from now. It has got to be financed, and the plan of financing has to be worked out long in advance. But it is coming, it is the trend, and every city ought to turn toward it and plan for it. Somewhere in Texas, I have forgotten which city it was, they succeeded in getting the railroad off from the main street of the town and move it to a back street by Court order, sustained by the Appellate Court. That is the same thing Los Angeles is trying to do right now, and it is temporarily held up in the courts. Does that answer your question, Mr. Blodgett?

WE SOLICIT MUNICIPAL ORDERS FOR



VITRIFIED CLAY SEWER PIPE AND FERGUSON SEGMENT SEWER BLOCKS

PACIFIC CLAY PRODUCTS COMPANY
LOS ANGELES, CALIFORNIA



FIRE HOSE

The GUTTA PERCHA & RUBBER MFG. CO.

34 FREMONT ST., SAN FRANCISCO, CAL.

Mr. Blodgett: Yes.

Mr. Hall: We have a difficult situation in our town of Richmond, an industrial town, about parks and playgrounds or recreation spots. You advocated joint supervision and use of those parks and playgrounds. How would you manage that, because our school playgrounds are used almost as much as they can be now, since part of the children are out on the playgrounds even during study periods. If we had that general joint use with us, in connection with the schools, we would have very small children, and baby buggies, and all sorts and stages of people inside of the school grounds. It would seem that we must have some other park that is outside of the school grounds.

Mr. Cheney: The best park that you could build, and the most economical and most useful and one that would be appreciated most by your people, after

they used it, would be a park adjoining or right in connection with the school, no matter where your schools are. Pay twice as much, if you have to, for a piece of land adjoining a school, even if you have to tear buildings off from it and but in there a place, and it need only be a small part of the area, for nurse girls and small babies, and so onjust go down the list. You should have in connection with every school no less than six acres of play-field. Every elementary school which will ultimately go to a maximum, should have an ideal, and there is a practical ideal, a six acre playground, which would include, approximately one acre given over to the women and children. smaller children. And you will find that the mothers of the smaller children. who have one or two older children in school, will see that their older children get more use of the playground when

Armco Culverts for Strength and Durability



The photo shows an installation of five 18' Armeo Corrugated Culverts which care for the drainage in a low, wide gutter where the tracks of a trans-continental railroad are crossed by a countly highway.

CALIFORNIA CORRUGATED CULVERT CO.

the mothers can go alongside to the other playground.

As to the budget, the best way to get the budget worked out is to take your municipal budget and make your play director, if possible, agree with your school board, and have them pay part of his salary. You will get a better class of men, because you can pay more. You should pay about \$12 or \$15, the school board paying an equal amount. But you will find that the school board does not feel that it can afford the appropriation of four or five thousand dollars for a high class man, and you don't either. And unless you have competent play directors, you are not going to have much of a playground system; and unless you have a well financed playground system, its maintenance is questionable-in fact it is more of a liability than an asset.

Mr. Hall: I agree with you on the

schools and that division, but as for the separate place for the women and the little bits of children, in an industrial town, while you are speaking of acres, you must remember that we are only speaking of feet over there.

Mr. Cheney: I should say it is false economy to buy feet. I should say to you that you will be sorry, and you will probably abandon a playground much under an acre, as time goes on. You may think now it is a great design. But if you remember that for every school you have got to have somebody superintend the place and take care of it, and that it is more of an expense to take care of one acre here and another one over here and another one up here, than it is to take care of three acres or two acres next to the school ground, and remember that if you can't buy the whole piece now, buy the piece next to your school grounds first and as fast as

PIPE TANKS CULVERTS

For PERMANENCY use STEEL For OUALITY buy "WESTERN"

We furnish Pipe from 1-16" to 1" thick in any diameter, WESTERN makes STEEL TANKS for all purposes.

Designed, Fabricated, Erected anywhere on the Pacific Coast.

WESTERN CORRUGATED CULVERTS will give service heretofore unknown, as WESTERN CULVERT METAL is of unequaled rust-resisting, non-corrosive Quality. You will find nothing but "WESTERN" Culverts under the State Highways.

Let Us Figure Your Specifications

Western Pipe & Steel Co. of Cal.

444 Market Street SAN FRANCISCO 1758 N. Broadway LOS ANGELES

TAFT

BAKERSFIELD

FRESNO

you can, because the same person can take care of both the playground and school ground. On the other hand, if you have these separate, detached little play grounds, you go into a comparative expenses of maintenance that is greater than the original expense, and that the expense of operation will eat you up and break down your play ground system in the course of time. It has in other cities, and I don't think you can escape it.

WATER RESOURCES INVESTIGATION

League of California Municipalities. Pacific Building, San Francisco,

Under separate cover we are forwarding you three copies of report on the Water Resources of California, prepared for the Legislature of 1923 by the Division of Engineering and Irrigation of the State Department of Public Works.

This report is the result of a state-wide investigation completed during the past biennium, under the provisions of an act appropriating \$200,000 for the work

Should the members of your league be interested in receiving additional copies of this report, the Division office will gladly furnish them upon request.

Sincerely yours,

DIVISION OF ENGINEERING AND IRRIGATION. Department of Public Works, Sacramento, By PAUL BAILEY. Deputy Chief of Division.



TRIDENT METERS FOR ALL SERVICES

Split Case Meters for Warm Climates C. I. Breakable Frost Bottoms for Cold Climates Hot Water and Oil Meters. Crest Meters for Large Flows Compound Meters for all streams, Large and Small

TRIDENT DISC

Sold 158,000 in 1921

A record unsurpassed in the history of the Meter Business

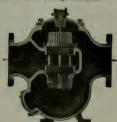
MANUFACTURED BY

NEPTUNE METER CO.

NEW YORK

PORTLAND, SEATTLE, SPOKANE, SAN DIEGO

LOS ANGELES OFFICE AND WAREHOUSE 701 East Third Street



TRIDENT CREST SAN FRANCISCO OFFICE

Pacific Municipalities

A Monthly Review of Municipal Problems and Civic Improvements

OFFICIAL ORGAN OF THE LEAGUE OF CALIFORNIA MUNICIPALITIES



BATHING SCENE-CORONADO TENT CITY

LEADING ARTICLES IN THIS ISSUE

PREPARING	THE	PROGRAM	FOR	THE	CONVENTION	AT	COR-	
ONIADO	`							а

THE NEED FOR CITY PLANNING

ECONOMIC VIEWPOINT
By Dr. W. M. Dickie, Secretary of the State Board of Health 169

Publication Office
Pacific Building, San Francisco, Cal.

Two Dollars a Year Single Copy 25 Cents

The Romance of Cement

This is the Age of Cement.

Towering skyscrapers, impossible without Cement, house hundred of thousands of workers.

Great bridges and viaducts of Concrete span rivers and valleys.

Miles and miles of Concrete Highways are flung across the land.

Huge Concrete Dams harness mountain torrents, supplying millions of horse-power to industry.

000

Portland Cement is not merely pulverized rock; it is a manufactured product requiring numerous distinct and varied mechanical and chemical operations for its production.

Safety requires that it be made properly and put upon the market in perfect condition.

0 0 0

Cement, an almost impalpable powder, when mixed with sand, broken stone, and water, quickly causes the combined materials to become solid Concrete with a hardness like native granite.

0 0

Pertland Cement manufacturers not only maintain their own laboratories, but through the Portland Cement Association cooperate for the conduct of research and tests requiring extensive laboratories. The results of these studies are placed at the disposal of the public.

Individual companies have their trained staffs of chemists and engineers.

In addition, the industry as represented by these individual companies cooperatively maintains 200 trained engineers in different parts of the country, to show the public how to use Cement most economically and efficiently.

The aim of the industry is to provide a product meeting the highest possible requirements, and to place at the service of the public its nation-wide facilities for furthering building and industrial activities.

PORTLAND CEMENT ASSOCIATION

785 Market Street 548 South Spring Street SAN FRANCISCO, CALIF. LOS ANGELES, CALIF.

A National Organization to Improve and Extend the Uses of Concrete

Offices in 22 Other Cities

Pacific Municipalities

AND COUNTIES

OFFICIAL ORGAN OF THE LEAGUE OF CALIFORNIA MUNICIPALITIES

Entered as second-class matter March 22, 1913, at the Post Office at San Francisco, California, under the act of March 3, 1879.

TWENTY CIVTH VEAD

VOL. 2	171	2 . 1	**					П	V L	-1. ·	1	712			• -							
EDITORS																		and				
Editorial	and	Bu	sine	SS	Offic	e	١.					Fif	th	Floo	r, F	acifi	Bu	ildin	g, S	an l	Fran	cisc

ADVERTISING RATES ON APPLICATION

Address all Communications to "PACIFIC MUNICIPALITIES," Pacific Building

San Francisco, California

MAY, 1923

NOTICE—Every city belonging to the League of California Municipalities is entitled to a copy of this magazine for each of its officials without extra charge. If not received kindly notify the Secretary.

A. Carlisle & Co., Printers, San Francisco

	CONTENTS	
PF	REPARING THE PROBLEM FOR THE CONVENTION AT COR-	163
Γŀ	HE NEED FOR CITY PLANNING By Lawson Purdy	166
Y۱	UBA CITY, CALIFORNIA, SETS A RECORD By Edward Von Geldern, City Engineer	167
W	HOLE TIME COUNTY HEALTH DEPARTMENT FROM AN ECONOMIC VIEWPOINT By Dr. W. M. Diekie, Secretary of the State Board of Health	169
A.S	SPHALTIC CONCRETE SURFACING FOR CALICHE, ROCK AND GRAVEL ROADS IN ARIZONA By Geo. W. Apperson, Jr.	175
CO	OMPARATIVE GASOLINE CONSUMPTION AND TRACTIVE RESISTANCE ON PAVEMENT SURFACES By A. B. Cutter, City Engineer, Everett, Wash	178
W	THAT OUR CITIES ARE DOING	180

ADJUST SALARIES TO THE COST OF LIVING...

ELECTRIC HEATING NOT YET A SUCCESS

By A. R. McPherson, of Tacoma, Wash......

LEAGUE OF CALIFORNIA MUNICIPALITIES

Organized 1897 Affiliated with the Bureau of Municipal Reference, University of California

President, FRANK C. MERRITT, Assistant City Clerk of Oakland First Vice-President, FRED C. WHEELER, City Councilman of Los Angeles Second Vice-President, NORMAN E. MALCOLM, City Attorney of Palo Alto
Secretary-Treasurer, H. A. MASON, Bond and Ordinance Expert of the City of San Francisco Executive Secretary, WM. J. LOCKE

Headquarters: Pacific Building, San Francisco Official Printers: A. Carlisle & Co., San Francisco

INFORMATION BUREAU

The League of California Municipalities maintains in connection with the Secretary's Office, a Bureau for furnishing city and town officials with information on municipal affairs, and loaning copies of new ordinances and specifications. Officials are urged to make a free use of this Bureau. Kindy send a self-addressed stamped envelope in all cases.

Members of the California League of Municipalities

Jackson

Alameda

Covina

Corona

San Rafael

Orange

Albany	Corte Madera	Kennett		Santa Ana
	Crescent City	King City		Santa Barbara
	Culver City	Kingsburg		Santa Clara
	Daly City	Lakeport	D:6- C	
	Davis	Larkspur	Palo Alto	Santa Cruz
	Delano	La Mesa	Pasadena	Santa Maria
	Dinuba	La Verne	Paso Robles	Santa Monica
	Dixon	Lemoore	Patterson	Santa Paula
Arcata	Dorris	Lindsay	Petaluma	Santa Rosa
Arroyo Grande	Dunsmuir	Livingston	Diedmont	Sausalito
	East San Diego	Livermore	Pinole	Sawtelle
	El Cajon	Lodi	Pittsburg	Sebastopol
Azusa	El Cerrito	Lompoc	Placerville	Selma
Bakersfield	Elsinore	Long Beach	Pleasanton	Sierra Madre
Banning	El Segundo	Los Angeles	Plymouth	Sisson
Beaumont	Emeryville	Los Banos	Point Arena	Soledad
Belvedere	Etna	Los Gatos	Pomona	Sonoma
Benicia	Eureka	Loyalton	Porterville	Sonora ·
Berkeley	Exeter	Lynnwood	Potter Valley	South Pasadena
Beverly Hills	Fairfield	Madera	Red Bluff	South San Francisco
	Ferndale	Manhattan Beach	Redding	St. Helena
	Fillmore	Manteca	Redlands	Stockton
	Fort Bragg	Maricopa	Redondo Beach	Suisun
	Fort Jones	Martinez	Redwood City	Sutter Creek
	Fortuna	Marysville	Reedley	Sunnyvale
	Fowler	Mayfield	Rialto	Susanville
	Fresno	Merced	Richmond	Taft
	Fullerton	Mill Valley	Rio Vista	Tehachapi
	Gilroy	Modesto	Riverside	Tracy
	Glendale	Monrovia	Roseville	Tulare
Carmel-by-the-Sea		Montague	Ross	Turlock Ukiah
	Gridley	Montebello	Sacramento	
	Gustine	Monterey	Salinas	Upland Vacaville
	Hanford	Monterey Park	Sanger	Vacaville
Chula Vista	Hayward	Morgan Hill	San Anselmo	Vallejo Ventura
Claremont	Healdsburg	Mountain View	San Bernardino	Ventura
	Hemet	Napa	San Bruno	Venice Visalia
	Hercules	National City	San Diego	Walnut Creek
	Hermosa Beach	Needles	San Fernando	Walnut Creek Watsonville
	Hollister	Nevada City	San Francisco	Watts
	Holtville	Newman	San Gabriel	
	Honolulu	Newport Beach	San Juan	Wheatland Whittier
Corcoran	Huntington Beach		San Jose	
	Huntington Park	Oakland	San Leandro	Willits Willows
	Hyde Park	Oceanside	San Luis Obispo	Winters Woodland
Compton	Imperial	Ojai	San Marino	Yreka Yuba City

Associate Members-Oregon: Astoria, La Grande

Ontario

Total - - 243

San Mateo

Pacific Municipalities

AND COUNTIES

OFFICIAL ORGAN OF THE LEAGUE OF CALIFORNIA MUNICIPALITIES

Entered as second-class matter March 22, 1913, at the Post Office at San Francisco, California, under the Act of March 3, 1879.

PREPARING THE PROGRAM FOR THE CONVENTION AT CORONADO

September 10th to 14th, 1923

On September 10th, the opening day of the League Convention, a total eclipse of the sun will be visible in Coronado, the Convention City. Although a partial eclipse will be visible from most localities in California, a total eclipse will only be seen from Catalina and the vicinity of Coronado and San Diego.

At 11:32 in the morning a slight indentation, known as the first exterior contact, may be observed on the rim of the moon, nearly 57 degrees to the right of the sun's vertex. The total eclipse begins at about 12:57 at which time the sun disappears from view entirely and stars will be visible. Bright stars in the constellation of Leo with Regulus on the right of the sun and Denebola near the Zenith will be visible. Several planets are also in the vicinity, including Mars which is on the right of the sun. Mercury is on the left of the sun and Saturn a little further away still to the left. Farther still is Jupiter, while Venus will probably be too close to the sun to be observed.

Just before the sun disappears there are several striking and beautiful phenomenas which will be worth traveling many miles to see. One is the appearance of little crescents of light under the trees where the last rays of the sun shine through. These crescents are a sort of "Camera Obscura" effect and the points of the light crescents are just opposite in direction to the points of the last visible crescents of the sun.

Another phenomena is known as "Bailey's Beeds," a series of bright spots apparently on the edge of the moon, caused by the last rays of the sun shining through the irregular mountainous surface of the moon.

The totality lasts three minutes and one second. At 35 seconds past one o'clock the sun appears. This is known as the second interior contact. The crescents on the grass may again be seen, but in an inverted position. The last exterior contact, when the body of the moon finally leaves the sun, takes place at twenty minutes and thirty-four seconds after two o'clock.

At about the time that the first exterior contact takes place, a black cloud will appear from the ocean and travel inland. After the sun re-appears this cloud will return sea-wards. Scientists from all over the world are expected to observe this phenominal demonstration by the heavenly bodies, a thing that will not happen again in this particular locality in one hundred thousand years.

RAILROAD RATES TO CORONADO Office of the

SOUTHERN PACIFIC COMPANY

Convention, League of California Municipalities, Coronado, Cal., September,

As requested in your letter of March 12th, I show below the summer excursion fares to San Diego from the points named in your letter:

	3 Mos.	15 Day
	Ticket	Ticket
Chico	\$32.75	\$27.50
Sacramento	28.50	24.00
Stockton	26.25	22.00
San Jose	27.50	23.00
Fresno	20.50	17.25

These tickets will be sold from all other points on our lines in California at a corresponding reduction.

Yours truly,

CHAS. P. FEE.

STEAMSHIP RATES TO CORONADO

Los Angeles Steamship Co.

Dear Mr. Varcoe:

President of the Department of Clerks,
Auditors and Assessors:

Referring to our conversation yesterday, I take pleasure in advising the we can accommodate 86 passengers in outside rooms on "B" Deck at the \$28.50 rate; 60 inside on "B" Deck at \$28.50. We have 24 De Luxe Suites, 22 of which accommodate two persons each, and two Bachelor Suites for one man only, all at the rate of \$41.50 per passenger.

We will be glad to hold all space on this deck for you until you are in a position to state definitely just how many delegates will attend the League of Municipalities Convention in San Diego, Sept. 10, 1923.

We sincerely appreciate the friendly spirit you have shown toward our Line.

Yours very truly,

LOS ANGELES STEAMSHIP CO.,

H. B. Hатсн, District Passenger Agent.



S. S. Harvard of the Los Angeles Steamship Company Line.

HOTEL RATES AT HOTEL DEL CORONADO

The hotel rates as first announced still hold good. The following is a paragraph from a letter from Mr. Wright, Manager of the hotel:

"I am sure we could handle it very nicely, the same as we had other conventions, and will make the members very attractive rates. The meetings could be held in the ballroom and besides we could furnish them any number of committee rooms desired. Also would furnish them the music for dancing complimentary, and for those who would like to play golf will furnish cards to the Country Club and waive the usual green fee.

Following are the special rates, American plan:

Single room without bath, \$6.00 per day; double room without bath, \$11.00 per day.

Single room with private bath, \$7.00 per day; double room with private bath, \$12.00 per day."

Delegates should by all means make their reservations as soon as possible. The manager of the hotel has told us that he will give us first call on all accommodations, but naturally there will be few scientists and others interested in the eclipse who will want to come here at that time and who will have to be given accommodations if they reserve them ahead of our delegates.

Make all reservations direct with the



Hotel Del Coronado.

THE NEED FOR CITY PLANNING

By LAWSON PURDY

President, National Conference of City Planning

Before the days of the elevator and the steel frame, when the city population was only a small fraction of the population of the country, before the days of the automobile and the noisy garage, dwellers in cities could live in comparative peace with only the common law protection against a bone factory. The everincreasing rapidity of growth of modern cities in all countries, the mighty changes of the last forty years have combined to make city planning a necessity for health and safety, to say nothing of comfort and peace of mind.

City planning is taking thought for the morrow so that streets, parks, public places and public buildings shall be in the right place and be adequate for the needs of the future. City planning is more than this, for it includes the regulation of the use of land privately owned, by zoning ordinance.

The term "zoning" has come to be used to mean the regulation of building in a city. It signifies such regulation of the height, area and use of buildings as will protect each land owner from the impairment of his share of light and access, as will protect his ears from unseemly noises, his nose from unpleasant smells, and his eyes from offensive sights.

Some of the purposes of city planning and zoning are:

To prevent undue congestion of population.

To insure better sanitary conditions, providing minimum requirements for light and air.

To simplify the problem of street traffic regulations.

To make possible a sensible and more practical street paving program for the future.



When a City Sees Tomorrow. It Plans for Its Future Growth Today.

To render possible great economics in paving city streets through a decrease in the width of roadways, where size and number of buildings are limited.

To insure the permanency of character of districts when once established.

To prevent the scattering and intrusion of any inappropriate and destructive uses of buildings which deteriorate and decrease property values.

To stabilize and protect property values and investments.

To protect the maintenance of the home and of home neighborhoods.

To offer a safe district in which industries may be located without protest and with every facility to do business. (Copyrighted 1923, The Better Times

Syndicate.)

YUBA CITY, CALIFORNIA, SETS A RECORD

By Edward Von Geldern, City Engineer

Yuba City, the county seat and largest city in Sutter County, California, lies in the upper Sacramento Valley, 50 miles north of Sacramento. It is the center of one of the most fertile and progressive districts in the State and may be reached by paved highway, the Sacramento Northern Electric Railway and the Southern Pacific Railroad.

Fruit growing predominates and the principal crops consist of peaches, almonds, raisins, prunes, olives and pears. The Federal census shows a population increase of 60 per cent during the past decade.

Previous to 1921 only 30,190 square yards of paving had been laid. In 1921 a progressive board of trustees decided to initiate a comprehensive street paving program in order that Yuba City might be able to take advantage of the many opportunities for growth that were at that time diverted elsewhere, and commissioned the writer to draw up plans and specifications and handle the proceedings for the proposed work.

In order that the property owners might secure the benefit of competition it was decided to divide the work into four districts, calling for plain concrete on two districts and black base with Warrenite-Bitulithic top on the other two. The advantages gained by this procedure were ably demonstrated by the bids received. Portland cement concrete was bid at 25c per square foot and the black base bid, with patented top, was 28.3c per square foot, both prices including grading. The contract was awarded by the city council for concrete may be a supplement and the bids for the other

type were rejected and plans and specifications for concrete pavement ordered in the district where bids were rejected. Bids were then taken again on these districts and awards made for concrete pavement.

During 1921, 82,600 square yards of concrete pavement were awarded by the Board of Trustees, constituted by D. D. Green, President; E. E. Reeves, R. C. Trask, F. N. Benton and Dr. R. S. Christman, with C. C. Kline as City Clerk. Since 1921 all paving done in Yuba City has been of concrete.

In 1922 the incumbent trustees, R. C. Trask, President; E. E. Reeves, H. D. Moncur, G. B. Van Arsdale and Kenyon Gregg, awarded contracts for 45,000 square yards of concrete pavement, and a small amount of paving work will be done this year.

Prices for these latter contracts continued favorable, the awards being made at the following prices:

5" Concrete 4" Concrete Grading Total
Per Sq. Ft. Per Sq. Ft. Per Sq. Ft. Per Sq. Ft.

17½c 16½c 3½c 5"—21c

When the 1922 contracts are completed Yuba City will have all told 157,795 square yards of pavement, of which 127,605 square yards, or 80 per cent, are concrete. These concrete streets are laid not only in the high class residential sections but in the heavy trafficked business sections as well, and are giving satisfactory service.

The Federal census for 1920 gives the population of Yuba City as 1,708, and based on these statistics our little city has 92.38 square yards of paving per capits, including all classes or 74.71



Orange Street, Yuba City, Concrete paved in 1922

square yards of concrete paving per capita. This we modestly claim to be a record few if any other communities have attained.

In all fairness, however, we are forced to admit that we now estimate a population of approximately 2,500, a gain of 50 per cent in two years, and one of the principal factors in this rapid gain is because we have a well paved city, and

city officials with the vision to put these improvements through.

The bulk of the concrete paving has been done by contractors Galbraith & Ianes, of Napa, who have performed consistently good work and the streets present a uniform and attractive appearance

All of the concrete streets were placed under the direction of the writer as City Engineer.

WELL KNOWN LIGHTING ENGINEER ESTABLISHES SOUTHERN OFFICE

Charles T. Phillips, consulting engineer, has opened offices in the Wesley Roberts Building, Los Angeles, under the firm name of The Charles T. Phillips Company, Consulting Engineers. The personal of the firm will be Mr. Phillips, who is an electrical and street lighting engineer, Mr. Arthur Kempston, formerly Chief of the Department of Electricity of San Francisco, and Mr. Fred B. McNally, mechanical engineer, formerly of Fresno.

The members of the firm have been engaged in engineering practice in California for the last fifteen years.

The new firm will make a specialty of plans, specifications, reports and tests in connection with fire alarms systems, street lighting and power plants.

Whole Time County Health Department From An Economic Viewpoint

By Dr. W. M. DICKIE Secretary of the State Board of Health

Mr. Chairman and Ladies and Gentlemen: It is my desire this evening to show you, not so much what has been done in this state in public health, as to show you what we have not done. I find many times that we have a self-complacent mood. We think that we are doing all that there is to be done for the health and welfare of our people, and when we compare our results with those of other countries and other parts of this country, when it comes to certain specific districts, we find that we are not getting the results or accomplishing that which we should.

What is public health? It is a business which has for its prime object the increasing of the standard of life, avoiding disease and providing the individual with the necessary physical development, in order that he may carry out his life work with the greatest degree of efficiency.

Public health deals with prevention. not treatment. We are dealing with health, not disease. Our prime object is to keep people well. The practitioner of medicine gets his opportunities only when prevention has failed to obtain full results. That the individual or the community may attain this state of health, it is essential that they be provided with a pure, uncontaminated water supply, proper waste disposal, adequate pure milk supply, pure food, proper housing facilities, protection from those infectious diseases which not only destroy the individual but which, in many cases, handicap him throughout life, and invariably shorten his career

of usefulness; also a clean, wholesome, sanitary environment in which to live.

Now, there are a great many of those essentials that we have provided. We have done fairly well in our water supply, though we have in many instances room for considerable improvement. The same with our waste disposal. We have made great strides in the improvement of our milk supply and also our food supply. Probably we have made greater advancement, however, in our housing facilities.

But when we come to the protection of the individual and the community from infectious diseases, we have fallen far short of the mark. Infectious disease is a subject which the average individual is more or less ignorant upon, especially in reference to its control, which deals with the prevention and is, after all, that which is most interesting to us this evening.

I am going to divide infectious diseases into two groups: First, those which are due in the main to a faulty environment, such as malaria, yellow fever, typhoid fever, etc.; and secondly, those that are contracted by direct contact with an individual who is suffering from the disease, as, for example, measles, scarlet fever, whooping cough, tuberculosis, etc.

In reference to what we have accomplished and are accomplishing in prolonging the life of the individual, I would like to refer you to this chart, which was made from the last life tables that were issued by the United States Government. I might say in passing that these life tables are ten years behind the times. In other words, it takes ten years to gather the statistical information together, in order to plot those curves. If you will notice on the right of this chart are the number of children born alive in tens of thousands. The lower figures are the age in years. You will notice in this green line, which represents India, that there are 30,000 children die in one year out of every hundred thousand born alive on the first birthday. At the age of ten years, half of the children born of the hundred thousand have been lost. In Australia, at the age of ten, 12,500 have been lost. In Sweden, it is 14,000; in the United States, 18,000 and so on down.

If you take this horizontal line here representing 70,000, you will find that 30,000 have died at the age of one year in India, that in Italy 30,000 on the 17th birthday, in Japan 30,000 on the 22nd birthday, in Germany, on the 28th birthday, in the United States on the 38th birthday, in Sweden on the 45th birthday and in Australia on the 50th birthday.

There is no reason why in this country the span of life should not be extended, why the individual should not live as long as in Australia. We find that, on account of the mild climate we have, that our rate is much lower on infant mortality in this country than it is in Sweden. But here you will find that Sweden has done much better than we have.

This chart is the first one that has ever been plotted in the State of California, and we hope from now on to make a yearly curve, showing the number of children born out of every hundred thousand that are allive at these different periods. You will notice here the United States life table in 1901 was 39 years, following this horizontal line, and in 1910, 43 years, while Cali-

fornia shows 44, which is an increase over the remainder of the United States.

I would like to direct your attention to two characteristics of this California curve. One is that in the first 20 years, you notice the curve is much higher than it is for the United States, which is probably due to the work that we have been doing for the conservation of child life, especially in our milk supply. And you will also notice that the curve stands out here beyond the 70-year line, which is due to the large number of people that come to the State of California in the latter part of life, to live the remainder of their lives. So

Let us review what has been done, and is being done, in the elimination of this vast group, namely, malaria, vellow fever and typhoid. The eradication of the mosquito, which causes yellow fever, was a marvelous achievement in public health. This disease is practically unknown in our country today, and you are all familiar with the history of the building of the Panama Canal, how the French government had abandoned the canal zone and left the canal unfinished, because science at that time had no knowledge of the cause of vellow fever: and our Government later, through the scientific investigations that had been made, was able to eradicate the mosquito and make the canal zone a healthy, habitable strip of land, where a man could live and work.

It has been said that this achievement cost but one cent a day per man. Similar results are being attained today throughout the malaria-infected portions of our country. Malaria was brought to California in the gold days of '49, and spread through the two great valleys of the state and became endemic in many well-defined areas in these valleys. The State Board of Health is now making an exhaustive survey of these areas, to

determine in dollars and cents the exact cost of removing the brooding pools of the mosquito which causes malaria. In our work so far we have found it will cost a comparatively small amount of money to eradicate malaria and make thousands of acres of fertile land habitable, which are of little use at present, because, where malaria is prevalent, man cannot live and sustain himself with any degree of health and comfort.

The reduction of typhoid mortality is a matter of common knowledge, and the various health factors that have brought about the decrease in the typhoid health, rate are, pure water and milk supply, as well as proper waste disposal. And I desire to emphasize the fact that if the same typhoid fever rate that had prevailed in California in 1906 had prevailed in 1921, there would have been 1,059 deaths occur from this disease instead of 147 that actually occurred.

You will notice the deaths in California from 1906 to 1921, the black column on the right representing the number of deaths from typhoid fever, shows actual deaths 657, or at the rate of 32 per hundred thousand in 1906, and you will observe here the gradual decrease in the black column, until in 1921 there was a total of but 147 deaths with a rate of 4. With the increase of population, which is represented by the red and black column, if the same rate had maintained in 1921 as we had in 1906, we would have had an increase. In other words, we have accomplished a saving of lives of 8,590 in the 15 years. I might say that, with the exception

I might say that, with the exception of a few other states, this rate is lower than in most parts of the United States.

The foregoing diseases are today on

you and prevalent in any community, and, when found, are a reflection upon the health work of that community.

The second group of diseases repre-

sented by measles, scarlet fever and whooning cough, with which science is still struggling in an effort to find an adequate means of prevention, are those I desire to bring especially to your attention this evening, as actually needing modern scientific equipment in the way of health departments to give anything like adequate means of protection. Before we take that up, however, I would like to show you something also in reference to tuberculosis. This column on the right is per thousand, and the lower figures here, and the black column on the left represents the number of deaths in 1906, and the black column here represents the number of deaths in 1921. This represents the increase of population of the State of California since 1906, which is 755. So, if the same rate had continued in 1921 that we had in 1906, we would have had our black column extending up to the right of this red column here. In other words, we have saved 14,469 lives in 15 years by lowering the death rate in tuberculosis.

Now, that is a remarkable showing, when you consider the migration of tuberculosis to this state and the number of cases that come in, especially to the southern portion of the state. And you will notice here that we have practically, with an increased population of 75%, held our own.

In this upper chart, you will find on the left hand column at this point the total deaths per year, and on the right you will find the deaths under one year of age. In this column you will find it on the basis of 100,000 population.

The lower columns here represent the years. This red line running through here is the increase of population again, or 75%. The black curve is the general mortality rate. You will notice several peaks. This peak here was due to influenza. The blue curve here is deaths

under one year of age. If you will notice from 1906 to 1914, the infant mortality rate in this state was above the general mortality rate, and between 1914 and 1915 it dropped down below the general mortality rate, and again went up slightly during the influenza epidemic and also the last, since 1920, which is probably due to diphtheria.

Now, we have four children's diseases, diphtheria, measles, scarlet fever, and whooping cough. The purple coloring here represents whooping cough, the red scarlet fever, the blue measles, and the green diphtheria. It is customary with a great many people and some physicians to tell their patients that the sooner a child has the whooping cough, the better off the child will be, and that it is essential that children should have the whooping cough, and that in many cases they are perfectly satisfied that a child should have the measles and the scarlet fever. This large volume of purple running through here represents whooping cough. The red is scarlet fever, and the band is about the same breadth all the way through. Measles is shown here, and diphtheria runs along until you get to five years, and it runs up, especially in 1920.

Now, if you will notice, the peaks of infant mortality on that blue curve, and the peaks on the general mortality curve, and then observe the peaks on this chart here, the peaks here for the most part have been pushed up by whooping cough, and they correspond very closely to the peaks on the general infant mortality, showing that whooping cough must have a decided effect upon infant mortality on this curve here.

This chart shows the deaths from measles, scarlet fever, and whooping cough under five years of age. This chart shows the deaths between the ages of 5 and 15. And if you will observe, whooping cough has practically dis-

appeared, scarlet fever remains about the same, measles a little narrower, diphtheria is broader, on account of the children going to school. When you get over to this chart here, deaths over 15 years of age, you will find that whooping cough has disappeared entirely, also scarlet fever, and measles is very much diminished, as well as diphtheria. I think this proves conclusively that if proper control measures were instituted by the health department through the state, with the assistance, of course, of the medical profession and the general public, that it would be possible for us to save a large percentage of the children that die from those four diseases under the age of five years. For, if we could protect them until they reach the age of between five and fifteen. only a few of them would succumb to those diseases: and if it were possible for medical control to sustain this control up to 15 years, we would practically lose none of them.

When you take this chart over here, you will find that there were reported to us 9,448 cases of diphtheria annually, 14,000 of measles, 5,000 of scarlet fever, and nearly 3,000 of whooping cough, making a total of 30,000. As the great majority of these cases are not attended by a physician, we have a right to assume that not more than 50% of the cases are reported to us. Therefore, to be conservative, I would state that there must be about 60,000 cases of those four diseases in this state annually.

Now, we know that about 20% of the children that contract measles, searlet fever, or whooping cough, are left with complications that later in life show up, either in heart, kidney, or nervous system, and they have a great deal to do with the higher mortality rate in later life. Besides the large infant mortality we have from those diseases, it is just as important that we should protect

this large number of 30,000 children annually that are handicapped from those diseases for the remainder of their lives, thereby cutting down much of their usefulness, efficiency, and happiness.

These diseases are spread by direct contact between an individual having the disease and one who is susceptible to it. The principal means of control at the present time is isolation of the case during the period in which the infection is transmitted. For example, the death rate from tuberculosis in California, in spite of the continuing and prospective migration, has been reduced from 216 per hundred thousand in 1906 to 150 per hundred thousand in 1921, which, as I have stated, represents a saving of 14,469 lives during that period. And this record has been principally achieved by the establishment of sanitariums and improved institutions for the care of tuberculosis cases, thereby removing the infectious cases from the community and stopping the spread of the disease to others.

The one phase of health work that today is paramount in the minds of the public is the conservation of child life. in which a great deal can be accomplished. In 1906, the state's infant mortality rate was 160 per thousand, while in 1921 the rate was 67 deaths of infants under one year of age to every thousand live births. This reduced infant mortality rate has placed California in a most enviable position. With the exception of the State of Washington, no other state has a lower infant mortality. The rate will be still further lowered when we are educated to the necessity of a still better milk supply and proper control measures for the protection of children from the infectious diseases of childhood.

Taking the most common diseases of childhood, which I have already mentioned, measles, scarlet fever, and whoop-

ing cough, and diphtheria, there have occurred 60,000 cases a year, with a mortality rate of 1,081, and about 20,000 of those that survived that are physically handicapped. It has been estimated that if these diseases were entirely suppressed, the average length of life would be increased at least 10 years. How prevalent it is at the present time in the mind of the average parent that his or her child must have these diseases! Yet with the proper isolation of infectious cases, this terrible wastage of life and subsequent injury to kidneys, heart, lungs, and nervous system, might, to a large degree, be avoided.

We find that our infant mortality rate varies greatly throughout the various counties of the state. In some of the counties, where we have adequate health departments and attention is paid to the conservation of child life, we have been able to reduce our infant mortality down as low as 51, while in other counties in the state the infant mortality is 112 per thousand. We feel quite confident that, with proper control measures and adequate health machinery, the infant mortality in this state could be reduced from 66 down to between 40 and 50.

I would like to show you, while I have two or three of these charts here. one in reference to typhoid fever that brings up a very interesting point. This red curve here represents the death curve of typhoid for the State of California. This broad line here represents the typhoid rate for the state, this dashed line represents it for San Francisco, and the dotted line for Oakland, showing that the typhoid rate in cities where they have well-protected and adequate water supplies and milk supplies, is much lower than the general rate for California. These sudden drops in the curve here are probably due, to a great extent, to lack of reporting at certain times.

You will also notice on this chart that the black curve here is for the United States, the red curve here is for the State of California-and you will notice how the California curve has dropped in the last few years, while the blue curve represents the State of Washington, and the green, short curve represents the State of Oregon. This curve is rather short, because we have only statistical information from the State of Oregon from 1918 to 1920. This showing would indicate that conditions on the Pacific Coast are very similar, especially with reference to typhoid fever.

This chart here also represents diphtheria, measles, scarlet fever, and whooping cough, similar to the three I have shown you over there, only it is made in columns rather than the other method of representation.

Now, the field of public health is large. Public health is purchasable. You, as a community, may have as much or as little in proportion as you desire to contribute in both money and influence, and in work. I know no better way than directing your attention to what can be done by way of stating the work that has been accomplished in one of the communities of this state which has a population of 6,000 and has spent in the neighborhood of \$6,000 a year in public health, or \$1 per capita. That community is the one in which we are at the present time. Palo Alto spent last year a dollar per capita for the maintenance of its health department. The estimated population of this city is 6,500, and its annual appropriation for the purpose is \$6,375. This provides for a full-time health officer, a fulltime nurse, a sanitary inspector, and a part-time bacteriologist and a stenographer-just think how few people. Some of the results that have been achieved by this organization are shown in the comparison of the Palo Alto death rate with similar rates for the state generally.

As Dr. Wilbur stated the other day, what do these other things we do in the way of building boulevards and buildings and homes and places of amusement amount to, if we have no health? I believe that they have made a demonstration here in Palo Alto that will be the means of many other communities throughout this state taking advantage of the opportunity of having similar records as we find to exist in this city.

Some of the results achieved by the organization in Palo Alto are shown in the following table: Palo Alto's general death rate is 8.9. The state death rate is 13.5. Palo Alto's infant mortality rate is 25.6. The state rate is 66.7. San Francisco's is 51. Los Angeles has 66. Some of the counties in the southern part of the state run up to 112, 116, and 118. The general death and infant mortality rate for the average small city of California are higher than these rates for the whole state.

The work accomplished in Palo Alto through the maintenance of this full paid health department at relatively small expense, means the annual saving of a number of lives and the maintenance of a clean city where conditions cater to the maintenance of a sanitary environment.

As to the communicable disease record of this state, during the year 1921 there were nearly 6,000 cases of small-pox. There was but one case in an unvaccinated adult in Palo Alto during that year. Palo Alto schools have kept open during the entire year, although schools in districts bordering Palo Alto were closed at times because of the prevalence of diphtheria and scarlet fever. The children in the public schools were kept under the supervision of a nurse, and

Asphaltic Concrete Surfacing for Caliche, Rock

By Geo. W. Apperson, Jr., Standard Oil Company

Paper read at "Annual Convention of Arizona Good Roads Association," Douglas, Arizona, January 15, 1923.

The question—"Has Árizona reached the time in its history when temporary road construction must give way to permanent road building?" has been discussed at this convention. This question, together with existing highway conditions more or less peculiar to our State, form the occasion for this paper.

In the Federal, State and County Highway Systems, in Arizona, there is a great mileage of road improved with local materials—mainly caliche and gravel. In the Federal System, which includes the main east and west, and north and south routes, there are some 500 miles surfaced with these materials. In the State and County systems, there are many miles more.

These caliche and gravel highways represent a very definite investment on the part of the State, it being safe to assume that a minimum of \$10,000.00 per mile has been spent in their construction. Drainage has been provided for, culverts and bridges built, and wishes improved. The roads were constructed in accordance with definite specifications and are roadway surfaces, well compacted, six inches or more in thickness and 16 and 18 feet wide.

They have given good service under the medium traffic conditions existing in Arizona, but are proving costly to maintain, it being estimated that a minimum expenditure of \$300.00 per mile per year is necessary to keep them in travelable condition. During the long dry spells, common to this State, these roads lose much of their binding material, due to automobile traffic and dust and wind action, and become potholed and corrugated. In this condition, new surfacing material is required, at a considerable added expense to the maintenance costs stated above.

These highways are classed as temporary road construction. The time is now opportune to change them to permanent roads. The soundest, most economical manner in which this can be accomplished is to pave them with an asphaltic concrete surface, averaging 21/2 inches in thickness. This type of construction has been started in the State, ten miles of the Tombstone-Bisbee Highway having been improved in this manner, during the latter part Pavements of similar type have been in more or less general usein the United States during the past twenty vears, and many successful examples of this construction exist today, establishing substantial proof of their merit.

The degree of success to be had with any pavement surface is dependent upon the support afforded the pavement from below. A well drained, well consolidated macadam pavement, furnishes an excellent foundation for a roadway surface. While unsuited to direct use by motor traffic, it possesses a degree of rigidity that offers support to the pavement surface. It also possesses a degree of flexibility, which enables it to absorb a portion of the impact shock imparted to a pavement surface by heavy traffic.

The caliche and gravel roads in Arizona, approximate, in their construction, a macadam pavement. They have been thoroughly compacted and consolidated



Arizona State Highway between Bisbee and Tombstone. Resurfacing old caliche road with two inches of asphaltic concrete.

by traffic. This is a decided advantage, for traffic is recognized as being superior to a heavy road roller for compacting and consolidating a macadam pavement. Weak spots that have developed, and faulty drainage have been corrected. These conditions have combined to make a roadway that offers exceptionally good characteristics as a base for a relatively thin asphaltic concrete surface.

Contract for the first five miles of this type of construction on the Tombstone-Bisbee Highway was awarded in May and for the second five miles in September of last year. Specifications provided for a 2-inch asphaltic concrete surface, 18 feet wide, with excess material to correct the inequalities in the existing road. As completed the pavement surface will average about 2½ inches in depth. The cost per mile on this work was about \$\$21,500.00.

The first five miles of this road laid has already had severe traffic test. Material for the construction of the second five miles was hauled over the greater portion of the pavement laid under the first contract. Five ton trucks were used in transporting the asphaltic concrete mixture from the plant to the job. These trucks were loaded with 61/2 tons, making a total weight on the pavement of 111/2 tons. There were over 1,000 of these truck loads-probably more heavy traffic than the road willreceive for several years to come. The asphaltic concrete pavements showed no signs of failure, and not a weak spot developed in the base. The success of the pavement under this severe traffic test offers substantial proof that this type is sound construction for use in Arizona.

Several of the more famous highways

and drives in the United States are built of this, or very similar construction. Michigan Boulevard, in the City of Chicago, was improved by paying with an asphaltic concrete surface over the existing macadam foundation: after fifteen years of service this pavement is in excellent condition and for the past few years over 20,000 vehicles per day have passed over this boulevard. In the San Francisco Bay region, the heaviest travelled highway route is that known as the "Wishbone Route," extending from San Francisco southerly to San Jose, and from San Jose northerly to Oakland. Between San Francisco and San Jose, 111/2 miles of the highway are paved with a 11/2-inch asphaltic concrete surface on macadam base. This pavement was laid in 1914. It carries in excess of 3,000 vehicles per day, is in excellent condition and has required only small expenditures for maintenance. Between San Iose and Oakland is a stretch of the same type, 434 miles long, also paved in 1914. This pavement carried over 2,500 vehicles per day. It is in excellent condition and no money has been spent in maintaining

In the State of Oregon, this type has had an extensive use. It was first laid in 1911, on the Linnton road, between Willbridge and Linnton, in Multnomah County, of which Portland is the county seat. On this road, a 2-inch asphaltic concrete surface was laid over old macadam. Linnton road is considered the heaviest travelled road in Multnomah County. The pavement, after 12 years of service, is in very good condition. Since the construction of this first pavement, a number of main trunk

line highways, near the City of Portland, have been improved with this type. They are giving universally good service, with little or no maintenance, and are in excellent condition. In the Oregon State Highway System, there are 265 miles of pavement consisting of a 11/2inch and 2-inch asphaltic concrete surface on a crushed rock base. The first of this type was laid in 1914. In the construction of these pavements the crushed rock was first placed on the road, and traffic was allowed to run over it for a minimum of one year, in order to compact and consolidate it. asphaltic concrete surface was then put on. A large mileage on the Columbia River Highway, famous all over the United States for its excellent construction and scenic beauty, was paved in this manner.

These successful examples-in Arizona and in other States, furnish very substantial proof that the type of construction is sound and that pavements of this character built in Arizona will give good service for many years, with a minimum of maintenance cost. Thus there is afforded a way whereby, with the expenditure of a relatively small sum for an asphaltic concrete surface, the State can capitalize upon the investment already made in caliche and gravel roads, and secure a class of permanent construction that has amply demonstrated its ability to meet the demands imposed by present day highway traffic. A comprehensive program, providing for the surfacing of caliche and gravel roads in the State, will be an economically sound highway policy.





Comparative Gasoline Consumption and Tractive Resistance on Pavement Surfaces

A. B. CUTTER, City Engr., Everett, Washington

(Written expressly for Pacific Municipalities.)

Having noticed more or less conflicting reports as to relative tractive resistance of rigid and non-rigid and gravel types of road surfaces, I arranged during the past winter for the making of exhaustive tests in the State of Washington, which is my home, and the neighboring States of Oregon and California, and believe the result will be of public interest.

There being no snow in either of the above Pacific Coast States, the test could be made during the winter months.

Representing the three general types of road surfaces, sections of road were selected for each type as follows:

- 1. Rigid type-Portland cement concrete.
- 2. Non-rigid type-Warrenite-Bitu-
 - 3. Gravel or earth.

The rules governing the comparative tests were as follows:

(a) Distance of each test 100 miles continuous operation. This being re-

Road Surfaces Bitulithic
Date of Test February 7, 1923
Location, Pierce County, Pacific Highway from
DuPont to County Club.
Air Temperature 40 to 50° F.
Tire Inflation60 # rear 55 # front
Running time
Average speed per hour26.7 miles
Gasoline consumed
Miles per gallon gasoline

garded as a distance sufficient to accurately record the gasoline consumption and produce a fair average. In some previously reported tests the mileage have been so small and so variable as to provide grave danger of inaccuracy.

- (b) Make test on road surfaces in good condition but having had at least three years' practical use.
- (c) In each State use the same automobile for comparative test of the several types, but different machines were used for comparative tests in some of the several States.
- (d) Uniform speed of not less than twenty nor more than thirty miles per hour.
- (e) Record the date, location, speed and gasoline consumption on exactly one hundred miles, as shown by speedometer on the car.

WASHINGTON

It was not practicable to here make test on gravel road, but exhaustive tests on the other surfaces were as follows:

Portland Cement Concrete February 8, 1923. Mountain Road, being extension of Pacific Highway toward Rainier National Park. 40 to 50° F 60 # rear 55 # front. 3 hrs. 45 min. 26.7 miles. 5.5 gals. 18.2

OR	EGON
Road Surfaces Bitulithic	Portland Cement Concrete GravelMultnomah Hillsboro RoadMultonomah Co., East
Date	January 30, 1923. January 31, 1923. Cool moderate wind Cool and fair.
Miles per gallon gasoline 19.05	. 18.18

CALIFORNIA

		Portland Cement Concrete	
Location	Tulare County	Tulare County	Fresno-Raisin Road.
Date	. February 3, 1923	February 3, 1923	February 1, 1923
Speed	15 to 20 miles per hour.	15 to 20 miles per hour	.15 to 20 miles per hour.
Weather	. Fair	Fair	Fair.
Temperature	45 to 75° F	45 to 75° F	.55 to 70° F.
Gasoline consumption, 19	00		
miles	7.1 gals	7 gals	.7.8 gals.
Miles per gallon gasoline	14.08	14.28	. 12.95.

CONCLUSIONS

- 1. Whatever reports may have been made or may be made in the future by parties interested to have one or another type of road show the most favorable gasoline consumption test, the above tests clearly show that:
- (a) Between Portland cement concrete and Warrenite-Bitulithic roads tested under uniform conditions, there is practically no difference in gasoline consumption.
- (b) On gravel or macadam roads in good condition, the gasoline consumption is from 10% to 35% greater than on either Warrenite-Bitulithic or Portland cement concrete road surfaces.
- (c) Tests being made on road surfaces in good condition, of course the gasoline consumption would be relatively increased if the road surfaces are in bad condition.
- (d) Under modern volume of traffic, good roads rapidly pay for themselves in economy of gasoline consumption and the same holds true in economy of tire and other automobile wear and tear.

For instance, given a road carrying an average of 2,000 vehicles per day or 730,000 vehicles per year, and calculating from the Oregon test above, we find with all the road surfaces in good condition, that:

On Warrenite-Bitulithic and Portland cement concrete roads the gasoline consumption is about (730,000 ÷ 19) 38,400 gals. at \$.30 = \$11,520.00 gasoline consumption per mile of road per annum;

On gravel roads (730,000 ÷ 14) 52,000 gals. at \$.30 = \$15,600.00 gasoline consumption per mile of road per annum. Saving on gasoline above by hard surface roads, 13,600 gals. at \$.30 = \$4,080.00 per mile of road per annum.

2. The relative saving in wear and tear on tires and other automobile parts cannot be computed, but it doubtless is fully as great as the gasoline consumption. Add to this the saving in road maintenance cost (to say nothing of wear and tear on nerves of road users) we have an object lesson of the economy of high type roads and of keeping roads in good repair for economic use.

The twenty-fifth Annual Convention of the League of California Municipalities will be held at Coronado, September 10th-14th, 1923.

Start making your arrangements to attend NOW

WHAT OUR CITIES ARE DOING

On May 1st a postal card request was sent to each city clerk in the state requesting news items for this department. The responses are as follows:

ANTIOCH—We have just completed the installation of 500 Empire water meters, at a cost approximating \$8,000.00, previous to the above installation our water services were only about 15% metered, whereas, it is now 95% metered.

We have also in course of construction a concrete reservoir situated at the pumping plant, the cost of this reservoir will be about \$25,000.00.

Later in the season further improvements and extensions will be made to our present water system.

J. E. McElheney,

COLUSA-Twenty-five blocks of streets are to be improved by grading and gravelling in the city of Colusa this summer; contracts will be let in the latter part of May for the work. It is likely that the Board of Trustees will go right ahead and improve all the remainder of unimproved streets within the city limits. The city has gone in with the county and brought a dredger up to throw out gravel from the bed of the Sacramento River. Several thousand vards of an extra good grade of river gravel has been thrown out on the river bank. This will be a big advantage in the improvement of streets as it has been necessary to haul gravel for several miles making the work quite expensive and the board has gone slow on new work for a number of years.

One or two streets will be opened up through a portion of the town that heretofore has remained in a solid tract. Fremont street will open up a new section and do away with the road across the commons known as Cemetery Lane. This is made necessary by the rapid growth of the city.

Plans are being drawn for the completion of the outfall sewer. It will be of 16-inch concrete. About a mile more will be laid.

The municipal water works has recently installed a new pump. Colusa now has a most excellent water system and an abundance of the finest water. Practically all the water is sold through meters except a very few flat rates for offices. About fifty new meters were installed this spring.

CORNING contemplates a bond election of \$30,00 for the construction of main trunk line sewer from the present outfall to the Sacramento River.

E. L. RANDALL,

City Attorney.

EAGLE ROCK has been annexed and will in the near future be a part of Los Angeles City. You will therefore please cancel our membership in the League of California Municipalities.

Yours very truly,
B. B. MARTSOLE.

City Clerk.

EL CAJON is contemplating the installation of a new water main which it is proposed to pay for on the assessment district plan with installment payments running for five years.

EL SEGUNDO—In accordance with your recent request for news concerning this city, would advise that \$150,000.00 of the \$200,000.00 Water Works Bonds authorized at an election held in August, 1922, will be sold within the next few days, and that as soon thereafter as the essential details may be worked out the Municipality will take over the existing water works within the city; namely, the El Segundo Water Company and the Sausal-Redondo Water Company

pany. The addition of these utilities to the city's business will require the construction of another municipal building, which will be located in the rear of the present City Hall. This new building will accommodate the Water Department and the Engineering Department, and will cost approximately \$10,000.00.

The Board of Trustees plans to rehabilitate the existing water works, and the installation of a stand pipe, larger water mains and standard fire hydrants will provide better fire protection, which will be augmented by the acquisition of a triple combination American-La France fire engine with 750 gallon pump.

It is planned also to widen the roadway of a portion of the Coast Highway which runs through El Segundo; to erect electroliers and to construct sidewalks and curbs on the portions of said Highway where they do not at present evist

> Yours very truly, VICTOR D. McCARTHY, City Clerk.

FORT IONES is constructing a new water tank for fire protection. The tank is of concrete and will hold approximately one hundred thousand gallons of water. It is located in the rear of the town on adjoining hill. The construction of this will be a great improvement and will provide the town with very good fire protection, the elevation of the tank being 200 feet above the level of the town.

MORGAN HILL-Engineer C. C. Kennedy of San Francisco is about ready to install sewer system.

Civic Club, churches, local lodges, Business Men's Club and public spirited citizens are fitting up auto camp ground to be donated to the town when completed.

The De Hi Evoraportos Co. are

building a \$40,000 new building to handle this year's crop of fruit.

A new well just completed to give consumers more water this summer.

W. S. SPOFFORD,

Clerk.

NATIONAL CITY has let the contract, and work is now under way, for the grading, construction of cement sidewalks and curbing and installation of culverts on thirty-five blocks of streets:

Plans are being prepared for a like improvement of fifty-three blocks additional:

Plans are also being prepared for

twelve blocks of street grading, cement curbs and culverts: The city also contemplates calling an

election some time in July for the purpose of voting bonds for the following purposes and amounts: New City Hall.....\$30,000

New Fire Apparatus...... 15,000 A pleasure pier..... 40,000 Street Improvement, 41/2 miles 16

Total.....\$157,500 O. A. MULLEN,

City Clerk.

PALO ALTO is continuing to operate its municipal paying plant and will construct pavements under direct contract between the Board of Public Works and the property owners at a total cost of about \$175,000. The pavement is of 5-inch concrete and aggregates nearly five miles of roadway. In addition \$80,000 is being expended by the owners in paving a new subdivision of forty acres. Water, sewer and gas mains will be laid underground for this tract and electric service will be installed, all the work to be done before the lots are placed on sale.

Recently \$160,000 bonds were voted for water and sewer main extensions, one-half of which will be expended this year, the new work to include an outfall sewer for East Palo Alto. Water mains will also be laid for Crescent, a 60-acre tract that is now being platted.

Two traffic thoroughfares are to be widened and paved to accommodate the increased business due to the steady growth of the city. Notice has also been given the Peninsular Railway Company to improve its tracks with new ties and rails and to pave along the tracks. The company has not yet intimated whether it will make these improvements at a cost of \$200,000, or let its franchise lapse. Some direct action will be taken by the Council soon to bring the matter to an issue.

The growth of Palo Alto continues at a notable rate. The building permits issued during the first four months of the year aggregate \$557,136.

Frank Kasson. City Clerk.

SACRAMENTO will hold a bond election on May 16th for the following purposes: Removing "Y" street levee, \$65,000; Street Improvements, \$126,000; Police and Fire Alarm Systems, \$25,000; Sixteenth Street Subway, \$66 000; Purchase of Riverside Baths, \$75,000; New Auto Camp, \$20,000; Levee Facing, \$90,000; Water Mains, \$200,000; Sewers, \$91,000; Fire Department, \$130,000; Auditorium, \$750,000; Garbage Destructor, \$216,000; Twelfth Street Subway, \$13,000; Suburban Parks, \$30,000; Purchase of Joyland Park, \$70,000.

Nearly every organization of the city has endorsed the propositions and the enthusiastic campaign committee meetings indicate that Sacramento is "going" great on council and city managership. Very truly yours,

H. G. Denton,
City Clerk,

SAN RAFAEL—At our election held last month Mr. D. D. Bowman was

elected Mayor and Messrs. T. L. Crane and Peter Bacigalupi were elected Councilmen. For the first time in the history of the city there was no opposition for the offices and all received a heavy vote.

The city has awarded a contract to the Raisch Improvement Company for the resurfacing of 370,000 square feet of pavement and contemplates doing additional work this year.

We are at present initiating a clean-up campaign over a period of several weeks which is expected to produce very satisfactory results.

H. K. Brainerd, City Manager.

WOODLAND—On April 9th a general municipal election was held at which the following named officers succeeded themselves:

Jos. A. Jacobs and George H. Fitz, Trustees; P. P. Lawson, Marshal; Frank Dietz, Assessor; Schurley E. Schluer, Recorder; J. H. Laugenour, Attorney.

D. E. Jacobs was elected Treasurer without opposition.

A. W. Fox, Wm. Gould and Frank J. Wohlfrom, were elected trustees to succeed J. R. Mitchell, W. F. Mixon and J. D. Musgrove. Mr. Mixon and Musgrove were not candidates for reelection.

At the same time the voters authorized a bond issue of Twenty-two Thousand Dollars (\$22,000.00) for fire motor apparatus by a vote of 1,043 to 90. These bonds will be offered for sale before the Board of Trustees on June 18, 1923, shall extend over a period of eleven (11) years with interest at five per cent (5%) per annum, shall be for One Thousand Dollars (\$1,000.00) each, dated July 1, 1923, and two (2) bonds shall be retired each year until the entire has been retired.

No other municipal improvements are contemplated at the present time,

although probably the street paving program will be resumed in the spring.

Yours truly,

J. H. LANGENOUR,

City Attorney.

CHULA VISTA—The city now has under construction, a new combined city hall and fire department house. The building is of reinforced concrete, and contains four offices for the city officials, two cells for a jail, room for fire equipment, a firemen's hall, room for sleeping quarters for firemen, a court room and council chamber.

A special election will be held May 22, 1923, for the purpose of voting bonds for paving in the city to the amount of \$44,000.00; increasing the fire equipment \$5,000.00 and equiping the new city hall \$3,000.00.

A project for extensive sidewalk laying is now formulating, and will be pushed to completion within the next few months.

The city has a population of approximately 3,500, nearly twice what it was a year ago. Its location, only eight miles from San Diego, with paved driveway into the city of San Diego, and twenty-minute street car service, makes Chula Vista a very desirable residential section, and its rapid growth appears assured.

C. S. Timmons,

City Clerk.

CLAREMONT has under consideration the following: Sewers and paved streets; the Chamber of Commerce is taking a straw vote on sewers and the paving of a certain number of streets.

Fire apparatus: The city trustees have advertised for bids for a new fire engine of 300 to 500 gallon pumping capacity, and it is proposed to open the bids at the regular meeting on June 7th.

Water supply: The Claremont Domestic Water Company is constructing a covered reservoir to hold about one and one-third million gallons of water. This will give Claremont all the pure water that she can possibly use and furnishes good fire protection.

Street signs: The Council is considering the installation of a number of street markings.

The Chamber of Commerce is starting its annual membership campaign and expects to accomplish many things for the good of Claremont, in the coming year.

> Yours very truly, J. D. Johnson,

City Clerk.

COLTON has recently voted bonds in the sum of \$22,500 for the construction of an outfall sewer line.

An extensive street improvement program is also under way.

OLIVE PHILLIPS, City Clerk.

CORNING contemplates holding an election for a bond issue to raise funds to construct main trunk line sewer from the present sewer outfall, a distance of three miles to the Sacramento River.

Also there has recently been installed a new street lighting system throughout the entire city, which will greatly improve the lighting facilities.

COVINA has recently completed a swimming pool. We are now putting down a 16-inch well to take care of the water from the swimming pool, also have let the contract for a sprinkling system at our city park. We are nearly ready to adopt a paving program which includes every unpaved street in the city, at an estimated cost of \$150,000.00.

Very truly yours,
John C. Hatchinson,
City Clerk.

EAST SAN DIEGO is experiencing a growth second to no other city in the state, in proportion to size. The building permits for the last three years show a steady increase as follows:

They were for 1920—\$133,778.00 They were for 1921— 563,900.00

for 1922- 879,640.00

Thev

were

And to April 9, 1923, they are 427,535.00

A thoroughly modern sewer system has just been completed at a cost of \$350,000,00.

A plan for the acquisition and improvement of the water distributing system has just been successfully carried out, at a cost of \$92,500.00. Bids will soon be called for the building of a modern filtration plant and probably for the laying of cast iron water mains.

The federal census of 1920 gave us a population of 4,148. The present population, based on the number of water meters in use, is conservatively estimated at 13,000.

The demand for paved streets is growing so fast, that street proceedings are the general order of business at all council meetings.

Yours very truly,
WILBUR W. EASTON,
City Clerk.

FAIRFIELD, will on Tuesday, May 22nd, 1923, sell to the highest bidder \$1,717.06 of municipal bonds to complete the payment to Contractor M. E. Parr on the installation of thirty-three electroliers on Texas street. The installation of these lights, which was completed about two months ago has made the main business and residential street a veritable white way, being three lights to each side on the block or six to the square.

The city engineer has been instructed to prepare plans and specifications for the paving of Union avenue with three inches of Warrenite Bitulithic pavement at an approximate cost of \$20,000 and for the scarifying of Texas street and the laying of a thin coating of black asphaltic concrete at an approximate cost of \$7,000.

Louis Morrell,

City Clerk.

Gustine has just completed a paving contract. Work done by Frederickson & Shannon of Fresno, whereby the main street is now connected with the highways on each side. The cost of contract was about thirty thousand dollars. Type of pavement, concrete. The city park is now under improvement.

W. L. SHAPPELL, City Clerk.

Los Angeles recently purchased from the Southern California Edison Company for \$11,000,000 the plant and equipment used in supplying electrical energy within the city limits. The city has installed several "super white ways" on various streets and is now giving attention to improving the lighting in the outlying streets and those business streets that are not included in the ornamental lighting area.

PACIFIC GROVE has recently installed a modern system of electroliers in the business section at a cost of \$8,365.00.

The Board of Trustees have commenced proceedings to pave with concrete approximately one and one-half miles of the main streets.

> E. S. Johnston, City Clerk.

REDIANDS recently installed about 300 ornamental street lights on residence streets; developed 400 inches water; built one of the largest out-door swimming pools in the south; purchased Retuck with full fire equipment; ornamental lights on front-footage plan; the rest out of funds in the General Fund account, no bonds.

Very respectfully,

С. Р. Ноок,

City Clerk.

SAN FRANCISCO has created a Bureau of Supplies, and has appointed thereunder a Purchaser of Supplies at a salary of \$10,000 a year.

ADJUST SALARIES TO THE COST OF LIVING

The members of the Police and Fire Departments of the City of Alameda recently petitioned the city council of that city for an increase of salaries and, as an argument in support of their petition, they submitted a tabulated scale of the salaries paid by other leading cities of the state showing that salaries in Alameda were low in comparison.

In this connection it is interesting to note that one city in the United States (St. Paul) has adopted the plan of adjusting its salaries to the cost of living. Mr. J. B. Probst, Chief Examiner of the Civil Service Bureau of positions, as well as a standardization of salaries. All positions except those in the teaching staff come within the new plan.

With respect to the taxpayer, the standardization means economy in government because public salaries will be automatically reduced with the decrease in the cost of living. The reductions will be just, equitable, and uniform, and consequently will not be attended by the lowering of morale which usually results when decreases or increases in public salaries are made in the customary haphazard fashion.

DATA FROM OTHER CITIES

	of Salarie	es Paid Po	licemen			
	Total	Monthly	Annual	Popula-	Cost per	Daily
City	Members	Salary	Total	tion	Capita	Salary
Los Angeles	1442	\$170 00	\$2,941,680	800,000	\$3.67	\$5.50
San Francisco	1010	170.00	2,060,400	700,000	2.94	5.50
Bakersfield	27	150.00	48,600	22,000	2.22	4.83
Oakland	300	165.00	594,000	250,000	2.37	5.32
Fresno	58	150.00	104,400	50,000	2.08	4.83
Stockton	51	162.00	99,144	50,000	1.98	5.22
Sacramento	78	155.00	145,080	80,000	1.81	5.00
Long Beach	90	150.00	162,000	90,000	1.80	4.83
Richmond	16	160.00	30,720	22,000	1.39	5.16
Berkeley	32	170.00	65,280	60,000	1.08	5.50
Piedmont	12	150.00	21,600	5,000	4.32	4.83
Alameda	27	140.00	45,360	32,000	1.41	4.51

The annual totals do not represent total maintenance costs, these not being obtainable in some cases, but are figured on the basis of patrolman's salary, which amounts to the same thing for a basis of comparison. Two per cent of our salary of \$140.00 is deducted for the upkeep of the pension fund, whereas in other cities it is added to the salary.

The above figures do not include the extra \$30.00 per month allowed to the Berkeley police for the use of their automobile, and \$25.00 to the Richmond police for the same purpose.

The raise in salary allowed Oakland and Berkeley recently is included in the above figures.

that city, has prepared an interesting pamphlet in explanation of the system in which he says:

"The City of St. Paul is probably the only city in the United States that is now definitely committed to the plan of fixing the salaries of its municipal employes on a basis which makes the compensation automatically adjustable to the rise and fall in the cost of living.

There has just gone into effect a simple but effective classification of

A standard salary presupposes the payment of a fair wage. But what is a "fair wage," Any wage, measured in money, may mean one thing today and something wholly different in a year from today. The measure of the wage ought to be its purchasing power, and when this purchasing power changes, the measure of the wage should change to correspond. Consequently, an equitable standardization, if not made adjustable to the cost of living, becomes

merely a temporary truce in the economic struggle between the employer and the employe.

History records many periods when the workers as a whole were contented and satisfied with the reward they received for their labor. Manifestly that reward must have been a "living wage." But when the purchasing power of their reward was cut down so that it no longer secured for them the ordinary needs of the family, there arose quite naturally a sense of loss,-of something wrongfully and mysteriously taken from them, and the question came: Is not the worker whose output has not changed entitled to a living wage tomorrow as well as today?

If labor's reward had always been based on an adjustable wage, the change in the cost of living would not have been felt by the worker, and no cause would have existed for the unprofitable economic warfare between him and his employers. Then, too, if an adjustable wage were common to all industries, the worker would soon come to understand that to secure something over and above a living wage he must either increase his production or fit himself to assume the greater burdens or responsibilities that go with a higher wage. And he would find the attainment of a higher wage in this way more to his advantage than to band together with some fellow employes for the purpose of forcing others temporarily to pay him more than he is justly entitled to.

Viewed in the light of public service, there is another, and very important, phase to the question of standardizing salaries on an adjustable basis. It is the experience everywhere that public salaries, when once increased, have tremendous resisting powers against reduction, even when salary decreases become wholesomely contagious in the community. To provide for a definite, certain and

equitable reduction in public salaries, the adjustable standardization is a prime necessity. It is the one thing that will eliminate politics, favoritism, discontent, and general demoralization of the service during times when salaries must and should be reduced.

The first efforts of the Civil Service Bureau in this city to secure an adjustable wage scale were made in 1917 when our bureau presented its own standardization of positions and salaries. consisted of fixing fifteen basic minimum salary grades, and allocating all city positions to one of these salary grades. The difference between grades was based on the value, importance, and difficulty of the duties. This salary standardization was adopted for the city service in St. Paul on February 1, 1918, and remained in effect till August, 1919. The present adjustable standardization became effective in six of the city departments in November, 1920; namely, in the departments of Education, Finance, Public Utilities, Comptroller, Law and Purchasing.

The first demand by any group of employes to obtain an increase in wages to offset the advancing living costs was made during the summer of 1918, and it was then that the Civil Service Bureau carried its point for a uniform increase in all grades, contending that if certain groups of employes who were receiving, for example, a basic minimum of \$75.00 a month required a \$10 increase in order to live properly, then all the other employes in the same grade were equally and necessarily entitled to this extra \$10.

The City of St. Paul no longer stands alone in the use of an adjustable scale. Since the year 1918 the adjustable wage scale has been adopted by various industries and governments. Australia in 1919 adopted the plan of fixing its minimum wage in conformity with the

changes in the cost of living. During the same year Austria, Denmark, Belgium, and Sweden adopted adjustable scales for determining the compensation of their public employes. During 1919 and 1920 the plan of adjusting wages to the changes in the cost of living was adopted for various industrial workers in the countries of Australia, Austria. Belgium, Canada, Denmark, France, Germany, New Zealand, Norway, Poland, Sweden and the United Kingdom, In New Zealand in 1919 the Industrial Conciliation and Arbitration Act was amended to give the arbitration court power to base its awards or industrial agreements on the alterations in the cost of living, and a system was established to adjust legal minimum wages semi-annually on the basis of prices published by the Government statis-

tician.

The basis of adjusting wages to the

under conditions such as prevailed in
1916, there was added to this basic rate a
percentage increase for the purpose of
ascertaining a fair rate of pay for the
year 1921. The year 1916 was taken as a
base because the concensus of opinion
among economists is that the level of
prices will return, not to a pre-war
basis, but in all probability to the level
that prevailed in 1916.

"UTL(C 1) 187

The percentage increase is determined by calculating the increase in the cost of living for the average family in 1921 over the cost in 1916, as shown by the index numbers published by the National Industrial Conference Board. The full percentage increase however, is only allowed to the lower-paid employes, and this on the popular theory that the higher-paid are not affected so seriously by a rise in the cost of living. The basic rates and their increases for 1921 were thus computed as follows:

Percentages Actual Entrance

			I Ci ccii cageo	AACTONI ADITORNICO
		Basic Rates	Increase	Salary
		for 1916	for 1921	1921
Grade	1,	\$ 40.00	60%	\$ 64.00
66	2	50.00	60%	80.00
66	3	60.00	60%	96.00
65	4	70.00	60%	112.00
44	5	75.00	60%	120.00
g;	6	80.00	55%	124.00
4	7	90.00	50%	135.00
44	8	100.00	45%	145.00
44	9	125.00	40%	175.00
44 -	10	150.00	35%	202.50
<u>u</u> .	11	175.00	30%	227.50
4 -	12	200.00	25%	250.00
4 -	13	250.00	20%	300.00
u .	14	300.00	10%	330.00
44 -	16	350.00	50%	367 50

cost of living is practically identical in all countries and is fairly well illustrated in the following description of the plan introduced for certain groups of municipal employes in the City of St. Paul. The method adopted in this city was to take the year 1916 as a base, and after determining for each particular group of equal value positions a basic minimum rate of pay which was deemed equitable

The standardization ordinance provides that readjustments shall be made on the first of each year. The latest index numbers—on January 1 last—showed the advance in the cost of living as 50% higher than in 1916, and the positions paying \$75.00 or under were therefore reduced for 1922 from a 60% to a 50% adjusting increase. The adjusting percentages for all rates in excess

Street Sprinkler Wanted

Any city having an old horse drawn street sprinkler for sale will please communicate with C. M. Burchell, Wheatland, Cal.

Street Spinkler Wanted

Preferably with flushing apparatus attachment.

Any city having a street sprinkler wagon for sale will please communicate with W. H. Gibson, Town Clerk, Newman, Calif.



PARAGON Fire Hose

"Anything less than the best in fire hose is a losing investment."

United States Rubber Co.

EUREKA FIRE HOSE DEPARTMENT 1104 I. N. VAN NUYS BLDG. LOS ANGELES, CAL.

> 812 SEABOARD BLDG. SEATTLE, WASH.



of \$75.00 were reduced proportionately by one-sixth.

A salary standardization must do more than merely provide adjustable basic entrance rates. The practice of granting small increases in salary for seniority and efficiency in service should also be recognized. The plan in this city is to give employes an increase of 5% (minimum \$5.00) of the basic rate for their grade for each six months of service in the particular position, up to and including two years, and thereafter an additional 5% increase for each five vear's service in the position, not exceeding, however, three such increases. These five-year increases are not allowed to employes who hold positions that come within the benefits of any pension

AUTOMOBILE CAMPS NOT FOR PER-MANENT RESIDENCE

The practice of permitting persons who use municipal and community automobile eamps to live in such camps for an indefinite period of time should be stopped without delay. An thorities in charge of many such camps are altogether too lax in the supervision of these places. Automobile camps are not designed for permanent places of seidence and the equipment, in most of them, is entirely inadequate ment, in most of them, is entirely inadequate the automobile camps are not designed for permanent places of the seidence and the equipment, in most of them, is entirely inadequate the automobile camps will defeat the very purpose for which they have been established. Complaint has been made that our camps are developing a new type—the "auto hobo." Time limits should be placed upon the stay of every camp outfit. (State Board of Health Weekly Bulletin for April 21, 1923.)

HUMAN CAPITAL

A century ago Sismondi showed that the health and strength of the workers and the energy of the race are the most precious forms of capital that can be amassed. However prosperous it may appear, an industry which leads to permanent deterioration in the workers' health is a social evil.

Industrial medicine considers man not only as an isolated individual but also as a group element, a unit participating in the formation of human capital, a link in the chain of the race, a cell in the human organism, a factor in the general prosperity in which he participates and of which he is the creator and the producer.

The strength and vitality of the race depend

upon the quality of its progenitors. The people's wealth and power depend on their work, the value of which depends in its turn upon the number and quality of its producers. An essential condition of national prosperity is the possession of sufficient numbers of healthy workers.

As a philosopher once said: "The first condition of success in this world is to be a healthy animal, and the first condition of national prosperity is that the nation shall be composed of healthy animals. That, however, is not all. Not only does it often happen that the outcome of a war depends upon the strength and bravery of the troops, but in industrial struggles also victory " depends upon the physical strength of the producers."

Man is just as much capital as is a machine or a horse, of which the cost price and the probable output must be considered. His output depends

upon his health, and upon his physical, intellectual and moral value.

During the active period of his existence, a healthy man produces normally more than he consumes from birth till death. During illness or disability he produces less or ceases entirely to produce, becoming a burden to collectivity. Healthy adults must produce for the nonproducers, i. e., children, old people, the sick and the infirm.

General prosperity depends, therefore, upon the proportion of producers to non-producers. It grows as the number of the former increases and the number of the latter decreases. Industrial medicine aims at increasing the number and value of producers and the length of their period of productivity, and at reducing as far as possible the number of non-producers (the sick and infirm) by fighting the causes of sickness.

Medicine and public health, by preventing avoidable illness and premature deaths and by reducing unproductivity caused by illness or infirmity, lessen the social burden and unproductive expenditure and increase production by increasing the number and value of workers.—Dr. Sicard de Plaucoles, Paris.—(State Board of Health Weekly Bulletin for April 28, 1923.)

Ninth Yearbook Ready for Distribution.—The Ninth Yearbook of The City Managers' Association is ready for distribution. It contains the proceedings of the annual meeting of The City Managers' Association held in Kansas City, November, 1922; a directory of the city-manager cities, the city managers and their salaries, and other tables showing the growth and the development of the city-manager plan. A special feature of the Ninth Yearbook is a section devoted to city administration in ten representative city-manager cities in the United States and Canada. An article of 2,000 words illustrated by pictures and charts he been written on the city management in each of these ten representative cities. The Yearbook shows 310 cities operating, or pledged to the city-manager plan of government on April 1, 1923.

New Book on the Merit System.—The government research division of the University of Texas have just published a book of 114 pages from the pen of Mr. B. F. Wright, Jr., entitled "The Merit System in American Cities," with special reference to Texas, which will be found a ready source of information upon the application of the merit system in state government.



BEAUTIFUL LAWNS

Easily and Economically Kept Beautiful with our Modern
Mowing Machinery

MOWERS FOR HAND-HORSE-POWER OR TRACTOR USE

H. V. CARTER MOTOR CO.
52 Beals Street Sa

San Francisco

N. CLARK & SONS

NCORPORATED 188

Manufacturers of

ARCHITECTURAL TERRA COTTA, PRESSED BRICK

VITRIFIED AND TERRA COTTA PIPE

HOLLOW TILE FIRE PROOFING FIRE BRICK TILE AND KINDRED CLAY PRODUCTS

WORKS: CAN ED ANGLOS

Office: 112-116 Natoma St. WEST ALAMEDA SAN FRANCISCO

ELECTRIC HEATING NOT YET A SUCCESS

By A. R. MacPherson of Tacoma, Wash. (Written expressly for Pacific Municipalities.)

Only within the last few years has electricity come to be considered as a practical means for heating our homes and dwellings, but like other of our modern electrical applications its rise had been rapid, particularly in the far western states where vast resources of available water-power assure a cheap unlimited supply of electricity.

But there remains much to be accomplished before electric heating can be considered a practical success. A recent meeting of the Seattle section of the American Institute of Electrical Engineers confirmed this same conclusion, explaining that until houses are constructed with much more care and until

more attention is given to insulation against the weather, electric heating will not become the success it should.

Tacoma, Washington, a city of 100,000 population, with its municipally-owned power plant, is considered a pioneer in the development of electric heating, and special study and experimenting has been centered upon this phase of municipally-owned utilities. While the results thus far attained are exceedingly profitable to the city, the consumers have a different story to tell, and the reasons for this dissatisfaction are worthy of consideration by other citizens and municipalities contemplating entering the electric heating business. Tacoma adver-

(Continued on page 192)



American-LaFrance
Fire Equipment
Mounted on Ford Chassis

The Favored
Fire Protection of Most
Small Communities

This sturdy apparatus increases the range of protection over that covered by hand or horse drawn equipment. Any member of the fire department who can drive a Ford can operate this car.

Li The chemical tanks are identical with those used on the largest fire fighting trucks, and are connected by a bu-pass system which permits a steady flow of chemical, one tank being recharged while the other is being discharged. Completely equipped with all accessories necessary to auccessful fire fighting.

Produced by the World's Oldest and Largest Manufacturer of Fire Apparatus

AMERICAN AFRANCE FIRE ENGINE COMPANY, INC.

151 NEW MONTGOMERY ST. SAN FRANCISCO, CAL. 1302 WASHINGTON BLDG. LOS ANGELES, CAL.

Are Your Streets Being Improved?

If so then you should consider the advisability of insuring your proceedings, your improvements and your assessment to comply with all the technicalities and intricacies of the law.

Then is the time you want expert advice, forms, bonds and books that agree with the street laws including all amendments.

Years of specializing on this phase of the law enables us to properly and legally assume responsibility for the correct fulfillment of your order.



46 years of continuous service to municipalities is our guarantee.

That's good insurance.

A. CARLISLE & CO.

(Continued from page 190)

tises itself as offering the cheapest electric power of any city in the United. States and for this reason the results of its experiments with electric heating can be considered authoritative in so far as economy constitutes the essential factor of its success.

It is indeed a noteworthy achievement that even with the prevailing cheap rates for electric current the city managed to clear over \$800,000 in profits from its one hydro-electric plant last year besides building a new steam power plant costing \$300,000. The possibilities of municipally-owned power plants are thus forcibly demonstrated.

Upon entering the electric heating business the city first undertook an attractive local advertising campaign with the result that hundreds of citizens installed electric heaters to the exclusion of all other forms of heating. It was but a short time until the one power plant was taxed to its utmost capacity and eventually the city was forced to refuse further contracts for heating purposes until the completion of their new power plant two or three years hence. They have just commenced construction on this new power site located in the Olympic Mountains, and estimates give it a production of approximately 125,000 horsepower. This should again place the city in a position to furnish all the power demanded, but it seems at the present time that the enthusiasm for this method of heating has cooled considerably.

The electric rates prevailing here operate upon a somewhat complicated basis with one definite feature, however. The more current consumed the cheaper proportionately becomes the rates. Thus, on a maximum demand use of 72 hours per month there is a rate of 2.4 cents per kilowatt hour for industrial current which decreases to .45 cents per kilowatt

Are You Equipped To Win Success?

Here is your opportunity to insure against embarrassing errors in spelling, pronunciation, and poor choice of words. Know the meaning of pussing war terms. Increase your efficiency, which results in power and success.

WEBSTER'S NEW INTERNATIONAL

DICTIONARY is an all-knowing teacher, a universal question answerer, made to meet your needs. It is in daily use by hundreds of thousands of successful men and women the world over.

400,000 Words. 2700 Pages. 6000 Illustrations. 12,000 Biographical Entries. 30,000 Geographical Subjects.

GRAND PRIZE (Highest Award) Panama-Pacific Exposition

REGULAR and INDIA-PAPER Editions.
WRITE for Specimen Pages. FREE Pocket Maps

G. & C.
MERRIAM
CO.,
Springfield, Mass.
U. S. A.

GRIFFITH COMPANY

Owners of
FAIRCHILD-GILMORE
WILTON CO.

Paving Contractors

Rooms 500-504 Los Angeles Railway Building Los Angeles

EDWARD GLASS

UNDERWOOD BLDG. SAN FRANCISCO

hour on 720 hours per month use. For lighting rates there is a flat charge of 5 cents per kilowatt hour for the first 40 watt consumption, in excess of which one cent per kilowatt hour is charged. The rates for heating vary in a similar manner, an average being one-half cent per kilowatt hour.

Stated in round figures this will work out about as follows: A six to eight room house of average size heated by two 3.000 watt heaters and two 1.500-watt heaters will cost \$15 to \$20 per month during the winter. This estimate is based on continuous heating of living rooms only, with intermittent heating of idle rooms. Obviously, there are many variations from this figure depending upon as many varieties of circumstances and states of the weather.

To those using furnaces or stoves this may seem an expensive method of heating and so it has proven. Strict economy of heat is also necessary in using electricity as compared to other cheaper forms of heating where little or no attention is paid to conserving the heat. and this disadvantage proves most uncomfortable at times. Where a common wood stove will heat a living room to a comfortable degree in fifteen or twenty minutes it will require two hours or more for one 3.000-watt electric heater. Two or more heaters could be used but obviously the cost will be nearly doubled. and to this is added a set minimum annual rate for each heater whether they are used or not

The most expensive item of electric heating is the cost of installation, and it is this factor which more than any other cause prevents its general acceptance by the public. Indeed, to the working man it is almost prohibitive. Where the house is already built the initial outlay would cost at least \$200, considering a six room house and including the special wiring, switches and heaters. This is hardly to be compared to the workingman's twenty-five dollar heater and six or eight dollars per month for fuel

BURNS McDONNELL &

Engineering Company CONSULTING ENGINEERS

Water Works, Sewerage and Sewage Treatment, Lighting Appraisals, Rate Investigations
Expert Testimony and Gas Works

FREE BOOKLETS-How to Conduct Bond Campaigns, Municipal Ownership Reasons, etc.

LOS ANGELES, CALIF. Marsh-Strong Bldg. KANSAS CITY, MO. Interstate Bldg.



It has also been found that electric heaters produce an excessive dryness of the atmosphere unless some measures are taken to increase the humidity, and such conditions are not conclusive to the health and temper of the occupants.

Electric heaters are still in an early stage of development. Constantly new improvements are being made on the coils, new forms of heaters resulting in greater economy of operation, and occasionally radical changes in the method of circulation, all of which may be taken as indicative of the healthy growth of a new industry.

The uncertainty of the electric current is another problem which we still must deal with. Tacoma recently had a demonstration of this in a most unlooked for manner. The Nisqually River which supplies the water-power necessary to turn the turbines became dangerously low owing to an unusually dry summer and a shortage of the autumn rains. In December came a severe cold snap of three weeks duration which still further reduced the flow of the river, thus causing a complete shutdown of the power plant for intermittent

periods during which it was necessary to store water in the reservoir in order to supply the current requisite for the peak load in the evening. With only one steam plant of 9,000 kilowatt capacity to fill the emergency the city was placed in a critical state with an unprecedented demand for power. It was found necessary to cut out portions of the city altogether from using electric current at a time when they needed it most. Needless to say, after this experience the owners of many electrically heated homes lost no time in installing stoves and furnaces.

After all is said and done, however, it seems reasonable to conclude that electricity will be the eventual and ideal method of heating, for its utility, cleanliness, time saving and labor saving factors are all in accord with the progress of modern science and industry. When our natural resources of coal, wood and oil begin to be depleted, then we shall be forced to turn more fully to electricity for heating purposes, and perhaps by that time science will have accomplished the solution of many of our present problems in electric heating.

Sacramento
Capital National Bank Bldg.

San Jose Bank of Italy Bldg. Los Angeles Fay Building

WILLIAM DOLGE & CO.

Certified Public Accountants
Municipal Accounting

Audits. Examinations and Special Examinations. Accounting Procedures for Municipal Utilities. Budget Systems Installed

Telephone Sutter 697

369 Pine Street

San Francisco, Cal.



COAST HIGHWAY— Clatsop County, Oregon, Widening and resurfacing old pavement, laid in 1914, with five-inch asphaltic concrete shoulders and two-inch asphaltic concrete surface. Photographed in 1922.



Re-surfacing saves \$6,500 per mile

In 1922, the Oregon Highway Commission resurfaced and widened two miles of eight-feet-wide hydraulic concrete highway between Astoria and Seaside, using five-foot shoulders and a two-inch surface of asphaltic concrete, at a cost of \$1.88 per souare vard.

\$2.50 per square yard was the bid price for wholly new construction to consist of five-inch asphaltic concrete for the full width. Hence, by using the worn-out pavement as a portion of the base for the new construction, a saving of approximately \$6,500 per mile was achieved — not counting the cost of removing the old pavement.

Ventura County, California, used the same procedure with equal success in paving Telegraph Road.

In its Biennial Report, issued November, 1922, the California Highway Commission declares: "The soundness of this plan cannot be successfully attacked—its success has been demonstrated."

That progressive highway engineers concur in this judgment is proved by the fact that in 1922 over 30,00,000 square feet of highway of all types of bases was resurfaced with asphatic concrete in this way, as against 17,000 square feet in 1921. We shall gladly furnish full details concerning this type of construction or request.

STANDARD OIL COMPANY

Sphalt for DURABILITY

"Well Tailored" Highways

A GOOD SUIT cannot be made without good material and careful tailoring. Cheap materials never stand the strain. They soon need patching. Poor tailoring ruins good materials and never satisfies. The suit sags, wrinkles and comes apart.

The same principle holds true in the construction of roads, the same troubles develop from poor workmanship or poor materials.

A. F. Gilmore Company's products are guaranteed to give the best results if properly used. Moreover, the engineers of the company are always anxious to furnish recommendations as to the most suitable application of these products.

Stop and watch any of the trucks at work spreading Gilmore Oils and you will find the A. F. Gilmore operatives to be men thoroughly equipped and trained to do the best work.

At Your Service For Better Roads

Gilmore Products

A. F. GILMORE COMPANY Road Oils—Fuel Oils 700 Van Nuvs Bldg.

GILMORE
PETROLEUM CO.
Gasoline—Motor Oils
Los Angeles

(Continued from page 174.)

those showing any signs of illness were excluded from attendance. Three hundred and two cases of communicable diseases were reported-120 of chicken pox, 76 of mumps, 41 of whooping cough, 17 of scarlet fever, and 12 of diphtheria. Two cases of typhoid fever were reported during the year, both of which cases were contracted outside of the city. As to infant mortality, there were but three deaths of children under one year of age, which, with 117 births gives an infant mortality of 25.6 per thousand births. Just imagine a city of over 6,000 people only having three deaths of children under one year of age!

For the past 10 years, this city's infant mortality rate has been low. There is no better index to the health of any community than its infant mortality

Now, the opportunity that Palo Alto has taken advantage of is open to every community in this state. It requires only the conviction and the necessary spirit to achieve this much-to-be-desired result. And with this thought in mind, it has been the desire and ambition of the State Board of Health to see that the various communities of California

should have adequate full-time health departments. When you stop to think that the average Board of Supervisors or city trustees appoint a health officer for \$5 or \$10 or \$25 a month; and then turn over all of the responsibility in reference to the health and sanitation of that community to a part-time health officer, who is expected to make a living besides his health work, out of the practice of medicine, and in most cases they are given no other assistance, it is not to be wondered at that the results achieved are not better. There are 312 health officers in the State of California A year ago, there were, I believe, four who got \$150 or more per month; 75 of them got between \$25 and \$50; and the rest of them got from along about \$5 a month up. Just think of it! Is that all that the people of California consider that they should contribute to the protection of the health of the people of their communities?

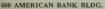
Public health, as I say, is purchasable. And the more we spend for the health and welfare of our people, the more we are going to get in return. Until a few years ago, it was the custom in various counties of this state for the members of the Board of Supervisors to

WE SOLICIT MUNICIPAL ORDERS FOR



VITRIFIED CLAY SEWER PIPE AND FERGUSON SEGMENT SEWER BLOCKS

PACIFIC CLAY PRODUCTS, INC.



LOS ANGELES, CALIFORNIA

FIRE HOSE

The GUTTA PERCHA & RUBBER MFG. CO. 34 FREMONT ST., SAN FRANCISCO, CAL.

build their roads in their own districts. The roads were built with the various constituents along the particular highway. It was not long ago that it was found to be more economical and essential for the various counties to employ experts and to establish highway commissions, county highway commissions, and this work was all turned over to experts, and the supervisors as individuals gave up the job of road building. The same thing applies to the public health of this state. It is only a question of time before the officials are going to realize the necessity of adequately paying the health officers and providing them with the necessary machinery to carry out the health work of the community. I am sorry there are not more of the officials of the municipalities of this state here tonight, as I would like to have them realize that this responsibility for the health and welfare of the people of their own communities cannot be passed over to an individual, but is their responsibility, and they must provide adequate means and an adequate department to care for that work.

A great deal of experimental work has been done through various parts of the United States in the establishment of adequate health departments for counties and municipalities. Some of the southern states, being new territory, made quite an advancement in this particular work. Now we are contemplating here in California making a demonstration in four or five of the counties of this state that now have practically no county health organization-of establishing adequate departments and making a demonstration to the rest of the counties and communities of this state, as to what can be accomplished by such an organization, to outline a typical full-time county health department, as follows: A health

ARMCO CORRUGATED CULVERTS

For Highway, Street and Railroad Drainage



STRONG





Full or Part Circle to Meet Varying Conditions

ENDURING

CALIFORNIA CORRUGATED CULVERT CO.

LOS ANGELES

WEST BERKELEY

officer who is paid an adequate salary, so that he may devote all his time to the public health: an office with a clerk and a stenographer, where people may go and gather what information they may desire, with reference to the health condition of the community, and make various complaints that they desire to make: a sanitary inspector, who may also be a meat or milk inspector-if the population of the county warrants it, maybe two or three sanitary inspectors. A majority or nearly all of the rural counties of this state give no attention. or very little attention, to sanitation and the inspection of eating houses, to the inspection of food handlers or the preparation of food, or lodging houses. We also contemplate the establishment of laboratory facilities for the diagnosing of various communicable diseases. Heretofore, except in two or three of the large cities of this state, laboratory work

has been done by the state hygienic laboratory, and the two branch laboratories. But in many cases the distance is so great that we can't give the service that we would like to give, and besides, we feel that it should be done by the community, that the health work, all of it, should be as far as possible, confined to the community. We also expect to place an adequate number of public health nurses, dividing, where possible, the county into districts, having in each of those districts a whole-time public health nurse, who can carry out the desire and orders of the health officer in the control of public health matters. but principally in the education of the public in the control of various communicable diseases. This condition as exists on these charts to my right here. is a matter of education. That condition would not exist today were the mothers of this state properly educated

PIPE TANKS CULVERTS

For PERMANENCY use STEEL For OUALITY buy "WESTERN"

We furnish Pipe from 1-16" to 1" thick in any diameter.

WESTERN makes STEEL TANKS for all purposes.

Designed, Fabricated, Erected anywhere on the Pacific Coast.

WESTERN CORRUGATED CULVERTS will give service heretofore

unknown, as WESTERN CULVERT METAL is of unequaled rust-resisting, non-corrosive Quality. You will find nothing but "WESTERN" Culverts under the State Highways.

Let Us Figure Your Specifications

Western Pipe & Steel Co. of Cal.

444 Market Street SAN FRANCISCO 1758 N. Broadway LOS ANGELES

TAFT BAKERSFIELD

FRESNO

in the control of those four diseases. And after all, public health is a matter of education. And it is not such a complicated subject but what the average person could comprehend the fundamental principles of it, at least. And I believe the time is coming when we will all be educated, more or less, into the care of our bodies. When you stop to think how little we know about ourselves, how little we know about the care of ourselves, and how much effort we all put forth in other matters which are of far less importance, I often think that if the individual would pay as much attention to the mechanism of his own body and the proper methods of feeding and caring for his body as he does for the care of his automobile, we would all live a great deal longer than we do at the present time.

We hope that we may be able to extend the organization of these health departments throughout the whole state. It is not our desire to take over the health work in these counties—anything but that. It is the desire of the State Board of Health that each of the local communities should have an adequate health department and take care of their health problems themselves, and leave us to act in an advisory capacity and to assist them whenever called upon, and not to actually take over any of the work.

I hope that you all will, especially those in the counties that we contemplate making this experiment in, give us every assistance, in order that we may make this a success, in order that we may increase the span of life of the people in the various communities in this state, that we may cut down to the irreducible minimum the infant mortality, that we may improve the general living and health conditions of the people of this state.

I thank you. (Applause.)



TRIDENT METERS FOR ALL SERVICES

Split Case Meters for Warm Climates
C. I. Breakable Frost Bottoms for Cold Climates
Hot Water and Oil Meters. Crest Meters for Large Flows
Compound Meters for all streams, Large and Small

TRIDENT DISC

Sold 158,000 in 1921

A record unsurpassed in the history of the Meter Business

MANUFACTURED BY

NEPTUNE METER CO.

NEW YORK

PACIFIC COAST BRANCHES AT PORTLAND, SEATTLE, SPOKANE, SAN DIEGO

LOS ANGELES OFFICE AND WAREHOUSE



TRIDENT CREST SAN FRANCISCO OFFICE



A Monthly Review of Municipal Problems and Civic Improvements

OFFICIAL ORGAN OF THE LEAGUE OF CALIFORNIA MUNICIPALITIES



THE FAMOUS MONOPLANE T-2 LANDING AT ROCKWELL FIELD, CORONADO, ON MAY 3RD.
AT THE COMPLETION OF ITS COAST TO COAST FLIGHT

CORONADO TO BE THE WORLD CAPITAL FOR SCIENCE ON SEPTEMBER 10

THE FETE OF THE SUN AT CORONADO

THE FUNDAMENTALS OF ZONING

By Edward M. Bassett

203

205

Publication Office Pacific Building, San Francisco, Cal. Two Dollars a Year Single Copy 25 Cents







The new traffic problemand the answer

In dealing with the rapidly increasing volume of motor, truck, and stage traffic, the highway engineer of today is confronted by construction problems without precedent in the history of road building.

Between 1918 and 1922 the tourist traffic alone over Pacific Coast highways increased 500%. It is significant that during the same period the area of asphaltic concrete laid increased by 549%.

Asphaltic concrete answers the new traffic problem—it stands up under heavy and fast traffic conditions—because of its superior bonding qualities, imperviousness to water, and cushioning under impact.

Furthermore, it has other great advantages in that the first cost of asphaltic concrete is reasonable and its maintenance cost is low, as demonstrated by Pacific Coast highways which have stood up under ten to thirty years of continuous service.

STANDARD OIL COMPANY
(California)

Sor DURABILITY

Pacific Municipalities

AND COUNTIES

OFFICIAL ORGAN OF	THE	LEAGUE	\mathbf{or}	CALIFORNIA	MUNICIPALITIES
-------------------	-----	--------	---------------	------------	----------------

Entered as second-class matter March 22, 1913, at the Post Office at San Francisco, California, under the act of March 3, 1879.

TWENTY-SIXTH YEAR

No. 6

. H. A. MASON and WM. J. LOCKE Fifth Floor, Pacific Building, San Francisco

VOL. XXXVII

Editorial and Business Office

By Judge D. J. Hall of Richmond
THE FUNDAMENTALS OF ZONING
By Edward M. Bassett
ADDRESS OF H. A. MASON IN

ADVERTISING NATES ON APPLICATION	
Address all Communications to "PACIFIC MUNICIPALITIES," Pacific Build San Francisco, California	ng
JUNE, 1923	
NOTICE—Every city belonging to the League of California Municipalities is entitled to of this magazine for each of its officials without extra charge. If not received kindly not Secretary.	
A. Carlisle & Co., Printers, San Francisco	
CONTENTS	
CORONADO TO BE THE WORLD CAPITAL FOR SCIENCE ON SEPTEMBER 10	203
THE FETE OF THE SUN AT CORONADO	205
WHY A CITY PLANNING COMMISSION? By G. Stanley Whitehead	206
What our cities are doing—municipal dam at fort dodge, ${\tt IOWA}$	
By R. E. McDonnell	215
BUDGET EXPERIENCE OF CALIFORNIA CITIES By William Dolge	217
STATE REGULATION OF MUNICIPALLY OWNED UTILITIES	

MEASURE NO. 10 AT THE PALO ALTO CONVENTION

LEAGUE OF CALIFORNIA MUNICIPALITIES

Organized 1897 Affiliated with the Bureau of Municipal Reference, University of California

OFFICERS President, FRANK C. MERRITT, Assistant City Clerk of Oakland

Headquarters: Pacific Building, San Francisco Official Printers: A. Carlisle & Co., San Francisco

INFORMATION BUREAU

The League of California Municipalities maintains in connection with the Secretary's Office, as Bureau for fruntisting city and town officials with information on municipal affairs, and loaning copies of new ordinances and specifications. Officials are urged to make a free use of this Bureau. Kindy send a self-addressed stamped envelope in all cases.

Members of the California League of Municipalities

Alameda Covina Jackson Orange San Rafael Corte Madera Kennett Santa Ana Alhambra Crescent City King City Oroville Santa Barbara Alturas Culver City Santa Clara Amador City Daly City Lakeport Pacific Grove Santa Cruz Anaheim Davis Palo Alto Santa Maria Angels Delano La Mesa Santa Monica Antioch Dinuba La Verne Santa Paula Arcadia Dixon Lemoore Patterson Santa Rosa Arcata Dorris Lindsay Arroyo Grande Piedmont Livingston Sawtelle East San Diego Livermore Pinole Sebastopol Avalon El Cajon Pittsburg Selma Azusa El Cerrito Lompoc Sierra Madre Long Beach Pleasanton Sisson Banning El Segundo Los Angeles Plymouth Soledad Beaumont Los Banos Point Arena Sonoma Belvedere Los Gatos Pomona Benicia Sonora Eureka Loyalton Porterville South Pasadena Exeter Potter Valley Beverly Hills South San Francisco Red Bluff Biggs St. Helena Manhattan Beach Redding Bishop Fillmore Manteca Stockton Redlands Suisun Blythe Fort Bragg Maricopa Redondo Beach Sutter Creek Brawley Martinez Redwood City Fortuna Sunnvvale Marysville Reedlev Burbank Fowler Mayfield Susanville Burlingame Richmond Calexico Fullerton Tehachapi Mill Valley Rio Vista Tracy Calipatria Riverside Calistoga Tulare Monrovia Carmel-by-the-Sea Glendora Montague Ross Montebello Sacramento Chowchilla Vacaville Monterey Park Sanger Chula Vista Hayward Vallejo San Anselmo Claremont Healdsburg Ventura Mountain View San Bernardino Hemet Venice Napa San Bruno Coalinga Hercules Visalia National City Colfax Hermosa Beach Walnut Creek San Fernando Colton Hollister Nevada City Watsonville San Francisco Colusa Holtville Watts Concord Wheatland Newport Beach San Juan Corcoran Huntington Beach Whittier San Jose Corning Huntington Park Willows San Leandro

Associate Members-Oregon: Astoria, La Grande

Oceanside

Ontario

Winters

Total - - 243

Yreka

San Luis Obispo

San Marino

San Mateo

Woodland

Yuba City

Coronado

Compton

Corona

Hyde Park

Pacific Municipalities

AND COUNTIES

OFFICIAL ORGAN OF THE LEAGUE OF CALIFORNIA MUNICIPALITIES

Entered as second-class matter March 22, 1913, at the Post Office at San Francisco, California, under the Act of March 3, 1879.

CORONADO

TO BE THE WORLD CAPITAL FOR SCIENCE ON SEPTEMBER 10

San Diego is to be the world capital for science Sept. 10 next.

Men of international prominence are coming here to observe the total eclipse of the sun.

There will be scores representing observatories of America, Europe and South America. San Diego is the favored spot where the sun is in total eclipse longer than elsewhere, except Ensenada, Baja California. For this reason this city has been chosen as headquarters for nearly all observations of importance. Several parties are arranging to go to Ensenada, while others will make observations on Mt. Wilson, near Pasadena, and some on Catalina Island. This will be the first total eclipse of the sun visible from this part of the earth since 1806, and will be the last until 2045.

Because of this major astronomical event many of the great scientists of America and foreign lands will gather here, constituting perhaps the most noteworthy convocation of savants in the history of America.

Yerkes Expedition

Yerkes Observatory of the University of Chicago will send an expedition here under the direction of Dr. E. B. Frost. The American Association for the Advancement of Science will hold its annual meeting in San Diego early in September, and the American Physical society plans to unite with it. Similar organizations from England, Germany, Italy, Spain, Japan and other advanced countries are expected to send expeditions.

The entire personnel of this array of international gathering of men of science will be actuated in its trip to San Diego, by desire to glean new facts about the sun and its phenomena, and all for the benefit of mankind.

As astromony focuses upon the sun, the more clearly the fact stands out that understanding of it conduces to the physical betterment and general welfare of the human race. This is instanced by the use of helium—first found in the sun, then in this earth, following the solar "hunch," and now incorporated in chemical practice, and which promises to become a most valuable factor in aerial navigation.

Duration is Brief

The duration of a total eclipse never exceeds eight minutes, and the longest time is 7 minutes 58 seconds, according to figures furnished yesterday by Prof. B. R. Baumgardt, mathematician and

prominent-science lecturer, who has just returned from New York, where he informally discussed with transcontinental railroad officials the problem of transporting here in September the great number of foreign scientists.

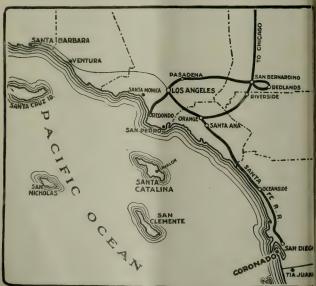
In this instance the extreme length of time during which the sun will be totally eclipsed will be much less—only 3 minutes 36 seconds at its longest, according to Prof. Baumgardt. And this brief length will be guaranteed the scientists only if they base their observations from San Clemente island, or Ensenada, 50 miles south of San Diego.

However, as San Clemente is lacking in conveniences—not even having adequate water supply—most of the observers, it is expected, will prefer Catalina and San Diego, although here the period of total eclipse will be even less—2 minutes 43 seconds.

At San Diego, for this reason, scientists in numbers will conduct their observations.

Disappears in East

The shadow of totality of the eclipse, striking the earth, roughly, south of Japan, will sweep across the Pacific ocean at the rate of 1850 miles an hour—one-half mile per second—and graze the extreme southwest boundary of southern California, amid the Channel is-



Map of Southern California Coast Line Showing Coronado

lands, of which Catalina and Clementa are two. Leaving southern California, the shadow will enter Mexico 50 miles south of San Diego, cross Mexico and Honduras and disappear from the earth on the Atlantic coast east of the West Indies.

Other places in southern California not thus restricted will be in the path of the eclipse, but not the total eclipse. For instance, a person in San Diego may see the eclipse 100 per cent total; in Pasadena it will appear 98 per cent total; upon Mt. Wilson the totality will be 98 per cent; Riverside, 97 per cent; Bakersfield, 96 per cent; San Francisco, 95 per cent.

According to Professor Baumgardt, the circumstances in southern California for observing the eclipse will be extremely favorable, with the sun 60 degrees above the horizon and less fog than at any other time of the year.

THE FETE OF THE SUN AT CORONADO

To those of us who have attended any number of conventions it has been noticeable that there is a very great tendency for delegates to come straggling in during the first two or three days of the convention and start straggling out before the convention is over.

It has been the aim of the convention committee to try to eliminate that condition at this year's convention by having some very attractive feature opening the convention and one equally attractive at the close.

On September 10th, the opening day of the League Convention, the Merchants Association of the City of Cornado are planning a spectacular Pageant in commemoration of the total eclipse of the sun which will occur on that day.

The Pageant has been termed "The Fete of the Sun" and will be produced on the Polo Grounds of the Coronado Country Club. Upwards of three hundred performers will be in the cast and it is the aim of the sponsors to get artists for principal parts of national reputation. A symphony orchestra of one hundred players will furnish the music.

The Pageant will start about 11:00 o'clock in the morning with Sun dances by the Indians and other Sun Worshipers and the climax will take place as the sun goes into eclipse at 12:57 P.M. In the afternoon after the sun has returned it is planned to have an aerial flying circus with the aeroplanes doing all of the stunts that are known.

On the closing night of the Convention the Local Committee is planning a social event of an unusual nature. The following day the delegates will be taken on a trip through the back country of San Diego County visiting Tia Juana, Mexico and the cities which are members of the League of Municipalities of San Diego County which includes El Cajon, La Mesa, National City, East San Diego, San Diego and Chula Vista. The trip will also include the famous Sweet Water Dam, the Lower Otay Dam, Upper Otay Dam, Murray Dam, and possibly if time will permit, one or two of the other interesting water development projects in San Diego County.

WHY A CITY PLANNING COMMISSION?

By G. STANLEY WHITEHEAD, City Engineer of San Mateo

Written expressly for Pacific Municipalities

If "Necessity is the mother of invention," confusion in city development must be the mother of City Planning, as the term is now used. Twenty-five years ago, one might peruse a dozen engineering magazines without discovering the suggestion of a need for City Planning, but to-day, how numerous are the articles on this most vital question, not only in engineering magazines but other periodicals of educational merit.

Those, having given this subject even the most superficial thought, realize that the principles involved in City Planning have been applied none too early to meet a very crying need; in fact, the need was manifest long before any definite nation-wide effort was made to satisfy that need.

To-day we stand condemned for the negligence of the past and are paying the price in the cost of street widenings, street extensions, and park and playground purchases at greatly increased costs.

No attempt will be made here to deal with that very important phase of City Planning, namely "Zoning," but only an effort to bring before the reader, a consideration of a few details in connection with the frame work of the city and its furnishings.

In taking up this subject, I wish incidentally to urge a more unselfish spirit of co-operation between the City Planning Commission and the property owner, knowing that the latter is sometimes affected unfavorably and, from a personal point of view, unfairly, when municipal improvement requires that the interest of the community shall receive first consideration. This principle, however, should be upheld by the individual even though at times annoying to him when his property lies in the path of advancing progress.

As manufacturing plants are laid out in detail to provide for present needs and with a perspective view of future demands, so the town should be laid out with due consideration for both present and future requirements.

It is true that it is not always possible to foresee the future city in its residential, commercial and industrial development and much of what now appears to be the result of a lack of good planning can be attributed to this fact; on the other hand, a large part of the poor planning can be traced directly to selfish interests, individually, collectively or politically used, by considering the immediate financial gain through the sale of property above the benefits and conveniences of the city or town at large. Fortunately, we are, to some extent, protected from future injudicious street design by the law now in affect, making necessary the approval of all subdivisions by some city or county authority.

As a result of the haphazard development of many of our cites, engineers, specializing in city planning, are called in as experts to diagnose the subnormal condition and to prescribe a remedy. Then, instead of a sugar coated pill, the surgeon's kn fe is necessary, followed by an exorbitant bill for the operation; or, in other words, the specialist finds his most difficult task in undoing in part, what has been done, in correcting mistakes made by those who planned locally

without any preconceived idea of the relation that would ultimately exist when their fragments were united into the completed whole.

My plea is for a truer sense of the relation of things as applied to municipal improvement whether it be the layout of streets, the ornamentation of streets or the occupation of property along the streets.

Am I suggesting an altruistic spirit out of keeping with the times and so ideal that we cannot attain unto it, when I call for more hearty and sympathetic co-operation between the city planner and the property owner, whether one is dealing with the ornamental values of a single street, the laying out of major highways to better co-ordinate the city with its environs or the planning of a whole county to prepare for a more natural and normal growth?

Where is the city that has not some portion of its otherwise attractive streets sadly marred by the ugly, ill-designed garage extending to the street line beyond all other buildings, where trees of all sizes and kinds are planted in unbalanced array and where blossoming plants of brilliant but clashing colors alternate in the tree lawn? These are but a few of the inconsistences we see at intervals, in passing through a city, as the result of individual taste.

The most costly and disastrous mistakes of earlier days, however, are found in the width and alignment of the city streets, and for illustration, I need not go beyond the bounds of my own city. Here we have the main artery into the business district carrying a car line. This street is seventy feet in width until it reaches a point within one mile of the center of the city, where it is unfortunately reduced in width to fifty feet. There would have been ample space for a seventy or eighty foot street as the depth of lots on either side of this same street

varies from 172 to over 200 feet. An eighty foot street would still have all lowed lots over 150 feet in depth. In another part of the city, covering an area of more than fifty acres, and where a purely residential section exists, the streets are all seventy feet wide. Just across a creek from this area the streets are fifty feet in width, the greater width converging into the narrower at the creek.

Some of the results of such planning are as follows: congested traffic conditions on the restricted width of the main artery, endangering life, and, in time, a bond issue or tax, in some form, for street widening, costly in the extreme besides robbing the widened street of its rows of finely grown trees. In the residential section, la'd out with seventy foot streets, it means excessive expense for pavements and maintenance of same, and often a lack of proportion between the unnecessarily wide street and the low type of buildings constructed along the sides.

The abrupt ending of a street is another evil, common to all cities and usually marks the limits of one ownership. The abutting owner, finding it disadvantageous to extend that same alignment across his property, breaks the continuity. Again, streets will be extended a thousand feet or more in length with no provision for cross streets; later comes the burden upon the city for street openings.

The diagonal street is a nightmare to the property owner in the layout of his property, yet how essential, in the general development of the city's framework. Why should heavy trucking between the business center and the industrial district, between the commercial district and the wharves, between the center of one city and the center of its neighboring city, be required to zigzag its course through the streets of a rectangular or checker board layout when diagonal streets, carefully planned, will relieve the situ-

ation? True, the former arrangement of streets is greatly to the advantage of the person subdividing and selling his property, but such unfair demands upon traffic are not only an inconvenience to the general public but an economic loss to the business interests of the city that goes on year after year until remedied.

One might continue calling attention to other equally unfortunate situations in the early development of the city plan but enough has been said to answer the question "Why a Planning Commission?" City planning, in brief, is simply a view to-day of what the city is to be tomorrow. Anticipating the demands of commercial expansion, increase in population, needs of social and civic activities an effort is made to meet them in the laying out of streets, parks, buildings, etc., and in all this work there should predominate the vision of the whole, so that, when the city has become full grown, it will measure up to the standard of a well planned city.

To help direct and bring about this standard, is the work of the City Planning Commission.



QUALITY CONSTRUCTION

Farsighted engineers recognize in the present demand for paved streets and highways an indication of the concentrated traffic pavements will be called upon to bear in the future. They are urging the construction of pavements which will be adequate not only for the traffic of today but also for the traffic of tomorrow. They refuse to let the urgent demand for pavements and more pavements influence the building of a large mileage of inferior roads in a hasty, makeshift effort to provide relief which can be only temporary.

In the selection of types of pavements, progressive road builders choose surfacing materials which will bear the brunt of today's traffic and emerge undamaged, ready to carry the greater traffic of tomorrow. Further, they are building pavements with meticulous care, knowing that quality construction will provide the "reserve" needed under the strain of traffic which is sure to come.

Because of their great inherent

strength, concrete pavements built today will, perhaps more than any other type, survive the traffic of today and stand ready to serve the traffic of the future. Quality construction will insure their survival even under the expected increase in traffic.

Engineers and highway officials can best serve their communities during 1923 by building for the future. The construction season is starting with a car shortage unusual for this time of the year-an indication that road building materials may be hard to obtain. Instead of allowing the demand for highway improvement to lead them to build a great mileage by "bulling the market" for materials and sacrificing quality in an effort to serve the present, discerning road builders will make every square vard of pavement placed just as high in quality as possible. Such a policy will result in the conservation of highway funds and in enduring satisfaction.-Concrete Highway Magazine

WHAT OUR CITIES ARE DOING

Hereafter a postal card will be sent monthly to each city clerk in the state requesting news items for this department. The responses for this month as follows:

Calistoga is at present surveying the streets preparatory to paving an area of about 5 blocks square in the city proper. We are sinking a well to supplement our water supply, and we expect soon to bond the town for an up to date fire fighting equipment. Our drainage system is being enlarged to meet the increased population. There are at present no less than a dozen new bungalows being built within the city limits, and a baseball ground which is already in very good shape; is being provided with an enlarged seating capacity.

As soon as the well-borer is at liberty, there will be sunk on the Springs Grounds, back of Mrs. Pacheteau's bathing establishment, a well into the boiling water river, which lies under a part of Calistoga, so that there may be a geyser which will spout continually for the benefit of our visitors.

Very truly yours, Calistoga District Chamber of Commerce.

Mrs. RUTH FULLER FIELD. Secretary.

Exeter-We are at present installing a new water system.

Respectfully, T. E. AUBREY, City Clerk.

Fort Bragg has just installed a pump on the Novo River. This pump is to furnish an auxiliary supply of water during the summer months. It will furnish 300,000 gals. per day and cost to install \$3,500.

During the last two months we have added a Road Grader and Auto tank for sprinkling the streets to our equipment at a cost of \$4,000

The city is just now taking the preliminary steps to pave six blocks on Main Street with asphalt Concrete pavement. It is expected to have this work completed by the 1st of December.

E. I. O'CONNOR.

City Clerk.

Hayward has just completed laving 13 blocks of Asphaltic Concrete at a cost of \$80,000. Work done by I. A. Costello, Jr. of S. F. Bond Assessment plan.

H. C. Reid of San Francisco is just completing a contract for the installation of 62-400 candle power Electroliers at a cost of \$8.132.00

On the 16th of May a contract was let to J. A. Costello, Jr. for 5 more blocks of Asphaltic Concrete at a cost of \$32. 986.54

The Board of Trustees have passed a Resolution of Intention to call a special bond election to raise funds to pay for a Segrave Fire Engine \$12,500 already purchased and an additional \$30,000 to the City Hall Fund

M. B. Templeton.

Clerk.

Huntington Park-On April 24th, this city voted to bond for \$250,000.00 to construct a Municipal Sewer system and disposal and treatment plants for same.

We are contemplating the paving and improvement of several streets.

Are about to install new and improved Street Lighting system on Pacific Blvd., our main business street

Will purchase auto truck for street cleaning department.

Will soon be advertising for bids for purchase of above mentioned sewer bonds.

Our population has increased, since 1920, from 4,500 to 12,000.

Yours very truly, H. H. HUNTER,

City Clerk.

Inglewood, California—I wish to advise you that Bonds in the total sum of \$292,-000.00 were voted and carried at a special election held last October, the money derived from the sale of said Bonds to be spent for the following civic improvement, to-wit:

Water Works Extension....\$157,000.00 Purchase of Water Bearing

Total.....\$292,000.00

The work on City Hall and water works' extensions is progressing along fine; the purchase of water bearing land has been completed and the above mentioned street improvements are about ready to go ahead.

For your information I want to state that the High School District is going to have a special election on the 22nd day of June, 1923, for the purpose of voting \$450,000.00 Bonds for building additional School buildings.

The City of Inglewood is forging ahead, its population now being estimated at about 10,000. The City is now preparing the necessary data for improving about ten miles of streets by special assessments.

Very truly yours,

OTTO H. DUELKE.

City Clerk.

Burbank is now laying over six miles of 6" and 4" water mains. The matter of a sewer system for the City is well under way. The sewer farm has been arranged for and bonds voted for the purchase of and preparing of the same to take care of the sewerage, and the formation of a sewer district for the purpose of carrying of City's sewerage to the City sewer farm is already under process of formation. Entire system will be working within one year.

At present we have approximately 24 miles of paved streets in our City, and in addition to this we have over 16 miles under process of improvement, either actually being improved or proceedings and petitions before the Board for improving the same. The improvements now under contract, also improvements for which proceedings are under way and petitions are being circulated, will consist of concrete, concrete curbs and sidewalks or macadam paving or asphaltic concrete.

Our water and electric department is kept very busy installing water meters and electric meters.

Industries and factories are being established and the City is growing by leaps and bounds. Census for 1920 gave us a population of 2913. We have at a conservative estimate to-day 9,000 people in our City.

Yours truly,

F. J. Webster, City Clerk.

Coronado is constructing a new Fire and Police Station and Garage at a cost of \$25,000.00. The Building will be completed before the League of California Municipalities Convention in September.

A lighting district is being considered to include Orange Avenue from the Ferry to the Hotel.

About \$10,000.00 is being spent in the re-surfacing of oil-macadem streets. This City operates a municipal plant and oil spreading equipment for this purpose.

G. F. HYATT, City Manager. Crescent City is fast assuming a metropolitan appearance by having an adequate sewer system installed in addition to having a great number of the streets improved. The principal business streets will be paved with an asphaltic macadam and the lesser streets will, for the present, be re-shaped and re-constructed to meet the present requirements, and will, later on, be brought up to every modern improvement consistent with the demand.

Contracts have been let and the work is fairly under way.

This, together with the Government's work of extending the break-water which will insure us an ample harbor makes us think we are really "getting on the map."

Yours truly,

HARRY K. TONKIN, City Clerk.

Oceanside has just completed the paying of main thoroughfares of the City with Willite Pavement at a cost of \$150,000.00 and will call for bids within the next month for one and one-half miles of cement sidewalks and curbs.

City Attorney now preparing necessary proceedings for the calling of a bond election for \$90,000.00 for improvements to municipal water system.

The Henshaw dam on the upper waters of the San Luis Rey River to impound 27,000 acre feet of water, just completed; water from this source to be distributed in the near vicinity of Oceanside.

Yours respectfully,

H. D. BRODIE, City Clerk.

Richmond—Is steadily improving its harbor, in conjunction with the U.S.

Is giving every encouragement to early establishment of a direct passenger and auto ferry between Richmond and San Francisco.

Is contemplating work of installing

first section of a comprehensive storm sewer system.

Has just completed improvement of subway portion of its main business thoroughfare, lessening approach grades and providing double streetcar track and roadway therein instead of single.

Has purchased new truck, and a Fordson tractor equipped with 24 inch concrete filled steel wheels and dump trailer for use in street repair work.

Has had a service truck built in mechanical shop of fire department for use of the department.

Is constructing substantial addition to main library building.

Has constructed for public use five most approved type tennis courts, two in western part of city and three in eastern part.

Is installing street name signs throughout the city.

Has adopted a zoning plan map, and is preparing a zoning and setback ordinance.

Has entered upon lease and purchase of 40 acres of "Grand Canyon Park" just outside city limits, at cost to amount to \$51,000, and has year's option to lease and purchase balance of 60 acres at same price per acre.

Has purchased 18 acre park and play-ground and athletic field near center of city, to be called Nicholl Park, at cost of \$60,000 paid out of bond issue of \$150,000 recently voted for system of parks and playgrounds.

Yours truly,

A. C. FARIS, City Clerk.

San Anselmo is now constructing six new concrete bridges, one large concrete culvert and a reinforced steel foot-path alongside the Main Street Bridge on the Highway. A \$75,000 Bond issue was voted for this purpose, but bid was received for \$56,000. Electroliers will be placed on the bridges and it is expected

that there will be other extras which with Engineer's fees will run the cost up to between \$65,000 and \$70,000

The roads in the Barber Tract are being improved with Asphalt Macadam surface. The contract was awarded for similar improvement in Sequoia Park, but the contractor failed to enter into contract in time and work is being re-advertised. Petitions are now being circulated for improvements of roads in other sections of Town All of the work mentioned in this paragraph is being done under the Improvement Act of 1911 and Improvement Bond Act of 1911.

Very truly yours,
ARTHUR W. STUDLEY,

Town Clerk.

Santa Paula—The enclosed statement will give you the figures in regard to the the 1923 Paving Program of Santa Paula, which involves 631,000 sq. ft. of Asphaltic Concrete and 480,000 sq. ft. Cement Concrete Pavement

In addition to paving, the Trustees propose to call a special Bond Election on the following:

Sewer contruction, intercepting sewers, disposal plant, sewer farm and equipment, Approximately \$100,000.

Fire engine, house for same and equipment, \$25,000.

City Hall, amount not determined at present.

Petitions have been received on several streets for ornamental street lighting, estimated cost of first district, \$25,000. Santa Paula's population increased

Santa Paula's population increased 17% within the past 12 months making the above improvements necessary, as well as many of minor importance.

Yours truly,

HARRY E. REDDICK, City Engineer.

Selma—Within the past six months the City of Selma has adopted a City Planning Ordinance, organized a City Planning Commission, and they in turn have divided the City into business, industrial and residence zones, so that the growth of the City may be carried out on more efficient and orderly lines.

The Planning Commission has secured an option on land within the City Limits to be used for manufacturing and packing house sites.

The Commission has recommended the installation of an electrolier system, consisting of 75 units and the Board of Trustees have been doing considerable research work in order to select a suitable system.

The Trustees are also contemplating the purchase of a tractor in order to do away with the use of horses in the Street Cleaning Department.

About a year ago our Trustees adopted an ordinance providing, means for enforcing the cleaning up of vacant lots and prohibiting the burning of trash within the fire limits. By this means, we were quite successful in having vacant lots cleaned up and the business people hired a truck to clean out the business district daily. We are well pleased with the working of this ordinance.

Yours very truly,

E. P. Todd,

City Clerk.

Taft—Here's some news from this city that may be of interest to readers of Pacific Municipalities.

Paving of Fourth Street from Kern to City limits approximately 3,200 feet with concrete and laying of cement sidewalks along this street six feet wide and twenty feet wide concrete pavement five inches thick. Also laying sidewalks and curbs on Lucard Street between third and sixth street three blocks long.

Will build incinerator in near future on five acre tract of land outside city limits. Trusting we can have this little bit of news in the next issue, I am,

Yours very truly,

H. G. ARNDT,

City Clerk.

Vernon—We wish to call your attention to the result of our Fire Bond election, held on May 10th, 1923, to incur a bonded debt of five hundred thousand dollars

\$500,000 for a fire protection system.

 Votes cast
 104

 Noes
 0

 Blanks
 1

 Yes
 103

It is the desire of the City Fire Commission to install a high pressure system and a fomite reservoir with pipe lines connected to all Oil refineries, which are all excluded to one zone.

This will not increase the present municipal taxation, as the present assessed valuation of the City of Vernon is over fourteen million dollars.

There is at present a bonded indebtedness of only one hundred and seventy-five thousand dollars outstanding.

Yours very truly,

J. J. KELLER,

Deputy City Clerk.

Kingsburg—Contract has been let for grading, paving and the laying of sidewalk and curb and gutter on five blocks. In addition to this two blocks will be paved on Califonia St. adjoining the Southern Pacific Co. new station. Besides the above there will be considerable sidewalk work and curb and gutter work done in the City during the coming summer.

Extensive improvements are to be made on the sewer system later on, such as enlarging the Imhoff tank, etc.

Yours truly,

C. R. MAGNUSON,

City Clerk.

Los Angeles recently voted \$1,500,000 for Playgrounds; \$2,000,000 for Viaducts; \$500,000 for Library grounds;

\$7,500,000 City Hall and Grounds, and \$15,000,000 for Harbor Improvements. F. C. Wheeler.

City Councilman.

Redding is calling for bids June 18th on 220,000 sq. ft. of paving and has another job covering about 70,000 sq. ft. to be let for bids about July 1st. Included with these jobs is also about two and one-half miles of curbs, gutter, and sidewalk. The pavement to be laid will be of black base type with a 11/2 in. Warrenite Bitulithic wearing surface. The job to be let in July completes a two mile section of the California-Oregon highway inside of the City limits. More than one mile of this section lies in an unsettled part of the city which would not justify an assessment for the cost of laving the pavement and the expense has therefore been paid for out of profits from the recently acquired Municipal Electric Distributing System.

A new Grammar School has just been completed at a cost of about \$110,000.00, and a new building to house the local post office will be completed about August 1st, at a cost of about \$50,000.00.

The Swimming Club are spending several thousand dollars for improvements at the local bathing beach under the State Highway bridge in the Northern part of the City, and developments at the City Park at the south entrance to the City are beginning to show results.

These are the outstanding features of progress at Redding, just now, except I might add that our Electric Distributing System still continues to net an average monthly profit of more than \$2,000.00 for the city, with the same rates being charged as have been fixed by the Railroad Commission to be applied by the Pacific Gas and Electric Co. for collections within incorporated cities in this district, excepting, however, the Combination, Lighting, Heating, and

Cooking rate which has been reduced, by the city, to about 20% below the rate fixed by the Commission.

Yours very sincerely,

LESLIE ENGRAM, Clerk of the City of Redding.

Santa Cruz—On May 8, 1923, \$400,000.00 was voted by the people for improvements to our Water System Reservoirs, Pipe Lines, etc. A large Drainage Imp. is just about completed in the lower Beach Hill District. Much street work is being done under the Imp. Act, and also by private contract. The Council is also considering the purchase of a new pumping apparatus for the Fire Dept.

Very truly yours,

S. A. Evans, City Clerk and Treasurer.

Sierra Madre has recently purchased a piece of property for Park purposes, authorized through a bond issue for \$30,000.

L. Dietz, City Clerk.

San Jacinto—Recently installed a new drinking fountain which is supplied by our delicious artesian water. June 5th we signed a contract for a new deep water pump and motor to augment the cities' water supply. This pump is of

100 inches capacity. We have a newly organized live volunteer fire department. and a new fire truck and hose which will give us ample fire protection. Chamber of Commerce is also a very live organization and is planning many improvements. At present, in conjunction with our city authorities, they are making many improvements in our Auto Park, planting trees, installing lights, putting in shower baths, etc. We expect to have one of the finest parks in So. Cal. when all these improvements are completed. San Jacinto is very much on the map and is going to be more so in the future.

> Geo. Grover, City Clerk.

Yreka—The swimming tank which is being constructed by Ross Neilon Post No. 122 American Legion is about complete and the concrete foundation for the dressing rooms, shower baths and toilets has been started. This tank is adjoining the Auto Park, in the rear of the City Hall, and will be in great demand by the tourists during the warm summer months. When completed the tank will be a gift from the Post to the City of Yreka.

Yours very truly,

C. J. Brown, City Clerk.

The twenty-fifth Annual Convention of the League of California Municipalities will be held at Coronado, September 10th-14th, 1923.

Start making your arrangements to attend NOW

MUNICIPAL DAM AT FORT DODGE, IA., GOOD INVESTMENT

By R. E. McDonnell

of Burns & McDonnell Engineering Company 404 Marsh Strong Bldg., Los Angeles, California

Cities do not always leave their undeveloped resources to be handled by private companies, who make excellent profits out of the development. Fort Dodge, Ia., five years ago, voted bonds and built its own municipal hydroelectric plant across the Des Moines River near that City, While it was anticipated that the financial investment would be profitable to the citizens for the saving of power it would develop, that was not the sole reason for building the dam. One of the chief reasons was the creation of a lake that could be utilized for pleasure purposes. The municipal dam has been successful from both standpoints and after five years of operation, the financial returns have proved so much greater than the expectations that a brief review of results may be of interest

The project had been advocated by private parties with the view of a franchise but upon the assumption that if the project was financially sound for private parties it ought to be equally financially sound for the municipality, the citizens, under the leadership of Mayor John F. Ford, decided to vote bonds for the project to be handled entirely by the municipality.

The construction difficulties' encountered were numerous because of various floods occurring during the construction period, but about five years ago the hydro-electric development was placed in operation, the City utilizing part of the current for the operation of its own waterworks plant and the surplus cur-

rent being sold to the local light and power plant, whose rates were correspondingly low because of the purchase of the surplus electric current. While the City was not owner of the local distributing lighting property, the citizens benefited thru reduced rates because of utilizing the municipal hydroelectric plant.

The advocates of private ownership in the operation of public utilities must receive a severe shock when they an-



alyze the excellent financial showing made by this municipal plant, operated by John W. Pray, Superintendent of the municipal water and hydro-electric plant. The net profits are so large that the municipality is in grave danger of being charged with profiteering.

The dam is 412 feet wide, 18 feet above bed rock and is a reinforced concrete structure. The project was built under contract following the plans and supervision of Burns & McDonnell, Consulting Engineers of Kansas City, Mo. and Los Angeles, Cal. The engineers also conducted a bond campaign under the auspices of the Commercial Club and at public meetings; illustrated lectures were given, describing fully all of the features of the proposed development. It is gratifying to know that the return on the investment exceeded the claims made by the Engineers during the campaign for the bonds. The turbine and generators are in duplicate, with total capacity of approximately 2000 H.P. The entire cost of the project was \$160,000. The bonds are for 25 years, bearing 4%% interest. Of the \$160,000, \$100,000 was raised by bond issue and the balance of the \$60,000 used for construction was paid out of the earnings from the municipal waterworks plant, where a portion of the electricity is used for the operation of the pumps.

The foregoing gross revenue shows a gross return on the investment of about 30% and a net revenue of 12.k8% on the total investment, after allowing for interest, depreciation and sinking fund.

The question naturally arises as to how many privately-owned undertakings are able to show better than 12% net on the investment. At this rate of return, the city will have the project entirely free of debt before the expiration of the



Fort Dodge, Iowa Municipal Hydro Electric Plant-Capacity, 2,000 Horsepower

bonds and toward the close of the period at which the bonds will expire, on account of reduced interest and sinking fund, the project will be paying the city over 20% net on the investment. All of this is accomplished in spite of selling the surplus electric current at the very low rate of .0085 cents per kilowatt hour and the waterworks pumping plant is charged for its current at the rate of 1c per kilowatt hour for power used there.

In view of the splendid investment by the City of Fort Dodge, other cities throughout the country should not hesitate to undertake and develop their own valuable water powers. Many projects of equal merit to the one at Fort Dodge lie undeveloped and while private companies are clamoring for high rates and are having a struggle to get funds for financing these projects, the muni-

cipalities themselves should utilize their own credit and develop these industries. It is of interest to see that the City of Fort Dodge utilizing its own credit borrows its money at 41/2% for this development and a private company would have undoubtedly had to put at least twice this rate for funds to carry out the same development. This difference between the credit of the city and credit of the private company, itself, makes the rates of many privately-owned light and power plants thirty to fifty per cent higher than they otherwise would be. By reason of having power available at a low rate, a strong inducement exists for securing new industries. The lake formed above the dam has transformed Fort Dodge into a pleasure resort now enjoyed by thousands, so both from the standpoint of pleasure and profit, it is a decided success.

Budget Experience of California Cities

By WILLIAM DOLGE, of San Francisco.

Mr. Chairman and Ladies and Gentlemen: I am not going to keep you very long. I shall endeavor to live up to the rule of these conventions, that the idea is the thing to be presented, and to let the audience do the talking.

Mr. Mason just made a plea for facts. That is what I tried to get, facts on the budget experience of the cities of California. And listen to my tale of woe. I sent out 250 letters to the 250 cities and towns of California, and I received 86 answers to the 250 letters. That indicates in part carelessness on the part of the city clerk or the auditor who received the letter, and it indicates in further part that they are sick and tired of answering questionnaires which they are getting from all sources.

Out of the 86 answers received, 46 cities reported that they were using a

budget, and 40 reported that they were not using a budget. Let me supplement that and say to you, out of the 250 odd cities and towns in the state of California, there are less than 60 that use a budget.

Fresno claims the credit of having introduced budgeting in its city affairs as early as 1885. And Watsonville claims that they there introduced budgeting into their accounts as early as 1903. But, as an actual matter of real fact, there was not any particular interest in budgeting until about 1908. I made a short sketch which I will read to you, of the number of towns, of the years in which I will read to you, of the number of towns, of the years in which I will read to you, of the number of towns, of the years in which they adopted a budget. It is this: In 1907, one town adopted a budget; in 1908 there were three; in 1909 there were two; in

1910, one; in 1911, four; in 1912, one; in 1913, one; in 1914, two; in 1915, four; in 1916, five; in 1917, two; in 1918, four; in 1919, one; in 1920, three; and in 1922 to now, one.

In 23 towns of the 46 reporting the use of a budget, the budget is incorporated in their accounts. In the remainder it is not incorporated in the accounts.

In answer to the question as to who prepares the budget, the answer was, the city clerk in ten cases, the finance Committee in five cases, and the joint work of the finance committee and the city clerk in 16 cases, and the trustees alone in three cases, the city manager in two cases, the auditor and controller in five.

The towns reporting, ten of them adopted the budget by ordinance, 15 by resolution, 18 used it merely as a guide.

Finally, in answer to the question "Do you consider the budget desirable for the conduct of your city's business?" The answer is "Yes" in 57 cases and "No" in 8 cases.

I am going to crave your indulgence while I read to you the reasons that were given, without mentioning the names of the source whence these reasons came, as to why the budget is not desirable.

The first one says, "No, it is not desirable, because it is not necessary for a city of this size." The second one says also "It is unnecessary because of the size of the city." The third one says "It is unnecessary because they make an annual estimate of expenditures, which is one half of the budget." The fourth one says "No, the city is not large enough." Here is a gentleman who says, "No, it is not desirable. No one can tell what is needed in the coming year." Another says "O.K. for the big cities only." Another one says "No, unnecessary-an unnecessary expense." The other "Noes" were on the ground that the cities are too small.

I want to conclude that little statis-

tical report with this statement: that up to a year ago, the United States of America was the only first class or second class or third class nation in the world that was rich enough to run its business without a budget. No other nation could afford to be as extravagant and as wasteful and as thriftless as the United States was, because they didn't have money enough to do it. Even the little two-by-four countries that have been created in Europe, all of them are operating on a budget. Of course, it is very fine for the California cities to pattern themselves after Uncle Sam, but since they are not as rich as Uncle Sam is, they are likely to get into trouble as time goes along, without a budget.

Mr. Mason said something about facts. On the highway between Chico and Marysville there is a sign put up by one of the tire concerns, and it says something to this effect: "You are now approaching the town of Gridley, and Gridley is unique in that its governmental expenses, its municipal expenditures, are taken care of out of the profits that are made through its public utilities, its lighting plant and its water plant." Please note that I have tried to tell you what appears on that sign. I think I am violating no confidence when I say that, about a year ago, I was called to Grudley for the purpose of assisting the trustees of the town of Gridley to prepare a budget and to get back on the basis of a reasonable tax rate, where they could make the necessary expenditures for the electric light plant. I cite Gridley, because Gridley is one of the smallest towns in the state of California.

At the other extreme we have Los Angeles and San Francisco, Sacramento, and Oakland—all of the large cities are, of course operating with budgets. If you gentlemen who are members of the boards of trustees and members of the councils where there are councils, realized what a great advantage a budget is, how it aids in the operation of a city, what it does to enable you to take care of the things that must be taken care of and have a stand-by excuse for denying the things you don't want to do, I am sure you will follow the example of those cities and towns that have adopted the budget.

I promised the chairman that I would confine myself purely to the statistical features of this questionnaire, because it seems to me that no argument is necessary or should be necessary from this platform upon the desirability of a budget. I want to close by calling your attention as individuals to the fact that No. 12 on the ballot in November is for the purpose of putting a budget into the constitution of the state of California. Mr. Seavey, who succeeds me as a speaker here this afternoon, while he was a member of the State Board of Control, with the assistance of his associates, did put a budget before the legislature. But that is outside of my subject-I just want to point out to you that even if they have not found it desirable up there at the Legislature to have a budget, that you as city trustees and as city clerks. but particularly the city trustees, will find it advantageous to have a budget in the conduct of your affairs.

I might say that Proposition No. 12 is a non-political proposition and I have no hesitancy in commending it to your kind attention and urging you to vote for it. It will need votes. It is one of those amendments that nobody knows anything about, and consequently it may be defeated by those who vote "No" on general principles.

Now I am here for the purpose of answering any question, so far as I am able to do so.

Mr. Mason: Mr. Dolge, would you mind stating in a few words the greatest advantage that would come to a small town by establishing a budget system? Perhaps it may not be clear to some of those present.

MR. Dolge: The best illustration I can give you of that is an actual occurrence. A number of years ago, in one of the towns of the state whose annual revenues were about \$20,000, and that isn't very much surely, the chairman of the finance committee decided that he could get along without their accountant and without the preparation of a They had had a budget for several years, but they were going to save that much. So he prepared the budget himself on the back of an envelope. When September came around, and it came time to pass the ordinance to fix the tax levy, the night of the meeting, they suddenly discovered that they had not made any provision at all in their budget for the money that necessarily had to be raised towards meeting bond interest and bond redemption. Thereupon it became necessary to call someone else in to find out what could be done. In other words, they passed a tax ordinance that night which was short of the amount required, they knew it at the time, but it was the last night they could do it, and so they proceeded on that basis. The next time an accountant was called in to assist them. Fortunately for this particular town, in making out their budget on the back of an envelope, while the chairman of the finance committee had forgotten some of the expenditures he had also forgotten some of the revenues, and between the two we managed to see them through the year.

The principal advantage of the budget is this: In a city, there is absolutely no excuse for not knowing where you are heading in on money matters. You haven't the problem of the business man. The business man's problem is to sell goods in order to get money. You have

no problem of making money at all. And the source of your revenue is absolutely fixed. That you get from your taxes. Your taxes are limited to a dollar, or whatever your charter provides. You also have additional revenue through your licenses, but you know definitely. or you can know definitely, within one half of one per cent, the amount you will have in any one year. Knowing that fact, it ought not to be difficult to determine within. I won't say one-half of one per cent, but within five per cent or ten per cent, in any event, of how much money you want to spend. The great practical difficulty we have to contend with in making up a budget is this: We make up a budget for a town, and we allow a margin of about 10% for emergencies. That is a conservative thing to do. If you go out on a trip from here to the East, on a pleasure trip, it is a conservative idea to have about 10% more money than you expect to use. Yes, but if we submit that budget to the Board of Trustees, or the Council, and say to them that that affords an unappropriated surplus of 10%, then immediately every one of the five trustees have use for that 10%. So that if we had all the money that could be appropriated, we would have to have five times 10%, or 50%. Sometimes that makes it rather difficult-sometimes it brings about a condition of affairs that some of these people report here, that they had tried out the budget a certain number of years ago, and nobody paid any attention to it.

The chief advantage of the budget, above everything else, to my mind, lies in this fact, that you can and do definitely determine the expense that must be met, whether or not. You can make—and this should be music to the engineers and all those who are on the pay-roll of the city—you can and you do make absolute provision for the pay-

ment of salaries. You can and you do make abolute provision for those things that are necessary, not necessarily statutorily required, but necessary for the needs of the government, and then you can make that little allowance for unforseen contingencies, and of course you know that the chairman of the fire committee wants some new equipment, and the oiled streets committee wants new equipment or certain new extension work done. After all is said and done. you have brought yourself down to the discussion of the desirable things in that way, and not absolutely the necessary things. And the necessary things are done, in any event.

I have rambled along, and I don't know whether I have answered the question or not.

PRESIDENT BARTLETT: In this discussion of the budget, nothing has been said as to the tightness with which the budget must be held to by the council or the board of trustees. In these various cases you have indicated, is the budget obligatory? Suppose, in a certain city, \$30,000 is set aside for the police department. Does that mean that no more can be spent during that year, or is that merely a mark to be shot at? In the city of Berkeley, our budget is prepared every year at the time of the levy of taxes, and all we do is to determine the amount that we desire to appropriate to the various departments. But there is nothing in our charter that will prevent any department from spending more than that, if the city council should later on change its mind. I would like to hear some discussion as to the desirability of having budget accounts fixed, so that money can be spent by a department in addition to that. without a special provision. I remember in San Francisco, under the old consolidation act, they had what was known as the "One-twelfth Act," and that prevented the city government from spending any more than one-twelfth of the year's income in any one month.

MR. Dolge: Theoretically.

President Bartlett: Well, theoretically, although I think practically that, while it might have been made more or less elastic, nevertheless up to the time of the fire San Francisco has kept out of debt to a very considerable extent by that provision of the One-twelfth Act. I would like to hear some discussion on this subject. That is a question which I think ought to interest the municipalities, no matter what kind of a budget they have. If that is a more desirable kind of a budget, let us make it that way.

MR. DOLGE: May I lead that discussion by saying this: that there are some charters that provide for an absolutely rigid budget. In practise, we found that the rigid budget does not work, unless your clerk, and your city employees try to get it up to that necessity. a rigid budget implies that it shall be properly framed in the first instance; if you frame your budget and make too great an appropriation for one department, and too little for another department, there is going to be a violation in practise, whether there is one in theory, or not. There should be a percentage leeway. By the way, the Onetwelfth Act is still in the charter of San Francisco is it not, Mr. Mason?

MR. MASON: Yes-theoretically.

MR. DOLGE: And it is effective, but it has many theoretical limitations. One of the most important theoretical limitations is, for instance, in connection with street sprinkling. It is absurd to say that out of the street sprinkling fund only one-twelfth shall be spent each month. That means that during the winter months, when it is raining, you spend just as much money for street sprinkling as you do during the summer

months when there is no rain at all. Perhaps theoretically I ought to be in favor of a rigid budget. I am not yet. I would like to see more education on the part of city councilmen and city clerks before we have that. I would like to see them understand it more thoroughly. I think the budget should be more rigid as to certain lump sums than perhaps in other directions. For instance, a budget that appropriates an amount for a water department or a police department, if you please, I think that ought to be absolutely rigid. But if you appropriate \$30,000 for your police department, as to how that \$30,000 is spent, I don't think is a matter for the council or the budget-makers to determine.

PRESIDENT BARTLETT: What I had in mind was whether or not each department should have a certain sum allocated to it during the year, and then have to function within that amount.

Mr. Dolge: My own answer to that question is this: that if you have a budget that is carefully made up and framed with adequate provision for emergency, why, then the budget should be adhered to strictly and to the letter. But since we are all fallible, and since we are all trying to look ahead for a whole year, it seems to me there should be a certain amount of thought given to the subject, for there are some things you can be flexible on, and others you need not be flexible on. A theoretically-and practically-correct budget is a budget which is formed with this in view, first, setting aside all amounts that the statute or the charter provides shall be set aside that must be paid. There is a great deal more of that than most people realize. It will be appalling to you in your own towns, if you haven't done so, to see the amount of money that must be expended by your community, in which the boards of trustees, the city officials, have absolutely no choice—they are

simply executive officers, simply doing what the law says they shall do. The outstanding illustration of that is bond interest and redemption. A city board of trustees have no choice on that. They must levy the tax and must collect the money and pay it out as part of the obligation of the municipality. Then there are other functions-there is sewer cleaning, and the maintenance of the fire department-they are absolutely obligatory. And after you consider, first, the statutory expenses, and secondly, these obligatory expenses, if you add those two together and then deduct them from your possible revenue, you will find that that leaves you a very nominal sum of money, and that now more than ten or twelve years ago, when we first began to agitate the question of budget, has it become necessary for towns to pay attention to those things, because otherwise your bonded indebtedness may grow to a load that you can not carry. Because you must realize that every time you go out and borrow \$100,000 for 40 years at 5%, you are going to pay \$2 for every dollar that you are getting-in other words, the total interest will equal the principal. strikes me, and I was appalled when I got returns on this thing, that Mr. Mason wanted to start something. If you gentlemen of the cities like Berkeley, like Vallejo, like Fresno, like San Francisco, like San Jose, where you have budgets-if you could only convince these smaller communities of the necessity of that sort of thing, something would have been accomplished. I have a report here of one town where they had a budget and they abandoned it. I am inclined to think they are a good deal like the old lady that didn't like rules, because she could not digest the rules. I think we don't know how to use it, and I don't know of a single town that has had the budget in any form whatsoever, that has worked it out at all carefully, that

has ever abandoned it. If you please, Mayor Bartlett, your problem in Berkelev is different from the problem of a town of the size of, say, Hayward, because it is an infinitely larger town, with much greater ramifications of expenditures. But the principle is identical. In the case of the little small town like Hayward, you have a Board of Trustees which acts in a sort of a dual capacity of being a legislative and an executive board. I know that strictly speaking they have no right to be an executive board, but they are in fact, as you gentlemen of the smaller towns know. That is not so in Berkeley. Your chief of police, your police department, is a separate function by itself, and there I would say that your department should have so much of an appropriation, and it should be limited absolutely to that appropriation. And I don't know, but my recollection is, that there is not anything in your charter in Berkeley that prevents you from adopting a budget as an ordinance. Have you found it-vou understand there is nothing personal about it.

PRESIDENT BARTLETT: Oh yes. We are discussing the principle of it.

Mr. DOLGE: (Continuing)—Whether the adoption of the budget at the end of the year should limit the amount each department should expend over that year, or whether it is better for the city council to change the appropriations to the different departments.

PRESIDENT BARTLETT: The direct answer to that is that the budget should be so framed that the amounts are absolutely limited to the departments, but that there is a surplus amount which can be used for emergency purposes. You can't foresee everything. You can't foresee an earthquake, you can't foresee the breaking of a water main, you can't foresee a conflagration.

Mr. Dolge: I will say this, perhaps
(Continued on page 229)

State Regulation of Municipally Owned Utilities

Remarks of JUDGE D. J. HALL of Richmond

at the Palo Alto Convention

in opposition to the proposal for state regulation of municipally owned utilities

THE PRESIDENT: We will now take up the amendment, the purpose of which is to require publicly owned public utilities to be regulated by the Railroad Commission. I will ask Judge Hall, of Richmond, to say a few words on that subject.

MR. HALL: Mr. President, and ladies and gentlemen of the Convention: As our time is growing short, and this measure does not require a great deal of discussion. I will be brief in what I have to say on the subject. The President has expressed what the measure is, namely, that it is one conferring the power upon the State Railroad Commission to take over the regulation of publicly owned public utilities. This seems to be a sort of illegitimate legislative baby, it hasn't any father or mother, so far as we can ascertain. It is a peculiar measure, and I am inclined to think from the phraseology of it, that it is a sort of a lightning bug that seems to exude electricity whenever we touch it. It seems to be a pet scheme of the California Power Trusts. I note particularly that it excludes the regulation and control of water plants publicly owned by the Commission. We have in California, according to the reports, 132 municipally owned water plants and some 21 municipally owned hydro-electric or electric distribution plants. This amendment provides for the regulation of all of those public utilities, publicly owned, save and except the water plant, by the Railroad Commission. That word "regulation" means a whole lot-it doesn't mean only the fixing of rates, but it means all the matters of regulation that are ordinarily undertaken by the Railroad Commission

over privately owned public utilities. Much of the argument used against the first measure discussed here, the franchise matter, applies to this measure. Perhaps the same phraseology might be applied to a large extent, that we should not attempt to take away from the local governing body, control of a matter which is simply of local importance and local significance, important to the people of the community themselves, and place it in the hands of a distinct outside body. It seems to me to be absurd upon the face of it to say that the people represented in Council should not have the say as to what they should pay for electricity which they generate, which they pay for, which they own and which they control. By what process of reasoning could we say that the Railroad Commission is better able to determine for us what we should pay for rates for that which we own and control than can we ourselves? What possible reason could there be for anything so absurd as that?

But a worse feature than all that is this: that the exception, to regulation by the Commission is, to the extent of saying that the municipalities shall not be interfered with in the matter of the issuing of bonds. In other words, the measure very generously permits us to say whether we shall issue bonds for the purpose of acquiring public utilities; but so far and no further. The municipality, under this amendment, could not inaugurate and conduct any public utility service without going to the Railroad Commission for a certificate of public convenience and necessity.

Just imagine that state of affairs, that a city or a town could not engage in any

of these affairs, save and except the distribution of water, without going to the Railroad Commission and saying, "Please, may we do this in our town for ourselves?" That is one of the bugs in the measure.

And then to say to us that a person dissatisfied with the service, a person desiring an extension of service into some district, unproductive territory, instead of going to the city council, instead of going to his own representatives and asking them for the extension, he shall go to the Railroad Commission and say, "You make them do this for me." It seems to me I would be wasting your time, if I were to talk upon anything so preposterous as that.

I only want to repeat, in conclusion, that this is a lightning bug, it has originated in the brain of the power people, otherwise they would have included all of the public utilities, water as well as the others. And it seems to me we want to put our foot down upon this usurpation of the power which is inherent in municipalities, to conduct their own business in their own way.

I thank you. (Applause.)

THE PRESIDENT: Is there anybody here who would like to say a word in favor of the amendment? I hear none. Is there any motion or resolution to be placed before the body on this matter?

MR. BRYAN: If I am in order, I desire to offer a resolution, Mr. Chairman.

THE PRESIDENT: You are in order.

MR. BRYAN: I offer and move the adop-

tion of the following resolution:
"Whereas, Initiative Measure No. 11,
proposing an amendment to the Constitution of the State of California, by
adding to Article XII thereof a section
or sub-section to be numbered 23b,
conferring upon the State Railroad Commission the authority and power of regulating and controlling all publicly
owned utilities and declaring that 'every

municipality, county, district and other public agency created and existing under California laws, owning, operating, managing, or controlling any property for supplying light, power, heat, transportation, telegraph or telephone service, to or for the public, shall, as to such property and the business conducted therewith, be a public utility, regulated by the State Railway Commission in all respects except in the issuance of securities, as private corporations and natural persons owning, operating, or controlling like property for like purposes are regulated,' will be submitted to the voters of the State at the next general election for adoption or rejection:

"Whereas, said proposed amendment would deprive many municipalities of the State of California of the governmental power now had and exercised by such municipalities in the management and control of their publicly owned and operated utilities to the economic injury of their citizens, and operate as an unwarranted and unnecessary curtailment of the governmental powers of said municipalities; therefore

"Beitresolved, by the California League of Municipalities, in regular Annual Convention assembled at Palo Alto, California, that said League is unalterably opposed to the adoption of said proposed amendment, and respectfully recommend that the same be not adopted."

The motion was seconded from the floor, and, no debate being offered, carried unanimously.

THE PRESIDENT: We will next take up the last one of the Constitutional measures on the program this afternoon, which is the amendment to require publicly owned public utilities except water works to pay taxes, and in that connection I will ask Mr. Mason to make a statement.

THE FUNDAMENTALS OF ZONING

With special reference to the plan for zoning suburban New York

Former Chairman of the Heights of Buildings Commission and of the Zoning Commission of New York: Counsel of the Zoning Committee of New York: Legal Director of the Regional Plan imaggarated by the Russell Sage Foundation.

The work now carried on by the Russell Sage Foundation, called "The Plan of New York and Its Environs," covers parts of three estates and extends approximately 50 miles in every direction from Battery Park. All of Long Island, excepting the easterly part of Suffolk County, is considered within this district. Zoning will be one of the fundamentals in the prosecution of this great work, as it will contemplate the future zoning of the entire area. The zoning plan has already been adopted by New York City, Yonkers, White Plains, Newark, Paterson and a host of smaller places, especially in New Jersey. Long Island communities cannot escape the consideration of this subject. The counties of Kings and Queens are already zoned as a part of the zoning plan of Greater New York. A few villages in the rest of Long Island have adopted the plan, but in the main the counties of Nassau and Suffolk are unzonde

When New York City in 1916 laid out its entire five boroughs in different districts according to allowable height, bulk and use, the plan was called "districting." The people, however, seized upon the more distinctive word "zoning," and now this method of protection is called zoning all over the United States. In suburban localities the bulk and use regulations become especially important. Where there is no zoning, private home localities can be invaded by tenement houses and stores. Two-family and apartment house localities can be invaded by stores and factories. Bright business streets

can be invaded by stables, garages and industry of all sorts. The lack of any regulation whatever is resorted to by exploiters to bring ruin upon improved localities in order that they may have a slight gain. These chaotic building conditions often produce blighted districts even in small cities and villages.

A good zoning plan will give plenty of room in every village for its industries. but will relate them to existing industrial locations or place them along railroads or waterways. In unzoned villages industries are often placed where everything has to be carried by truck to and fro. Such misplaced industries not only injure localities that are suited for residence and business, but the trucking destroys the roadways and brings a burden of taxation upon all. A good zoning plan leaves plenty of room for business to expand, but prevents it from jumping off business streets into purely residential localities. Sensible regulation of this sort is better both for business streets and residence streets. The business streets are better because they tend to become solid business and consequently rentals are better and the streets are better kept. Residence streets are better if business keeps off and rentals are better if they are purely residence.

Must Base Laws on Health, Safety and Community Welfare

Zoning regulation to be valid must be reasonable. It must be based on the health, safety and general welfare of the community. It must not be done in a

way that is partial, arbitrary or that even to a slight extent confiscates private property. The community itself ought to do the zoning. Probably the best zoning plan for a suburban city or village would be obtained if the land owners of every given section should inform themselves on what is the best development of their locality, consider how their preferences will fit in with the inevitable growth of the village and then make the zoning plan conform to their wishes. People too often think that zoning is something that other people force upon them. That would be a bad sort of zoning. Property owners usually know what is best for their present and future. The zoning maps should in the main express exactly these things. Then when the locality is developed according to intention the zoning plan prevents exploiters from invading the locality with buildings that bring only injury. Zoning is not retroactive. Buildings and uses that are already existing do not have to be altered. It looks only to the future. It seeks to preserve the value of investments and to stabilize proper uses.

A zoning plan helps to give a normal life to every suitably placed building. Where there is no zoning a building constructed strongly enough to last 100 years is altered or sometimes torn down in 20 years. Why? Because some injurious use has come in next door or on the opposite side of the street which has rendered the building almost valueless. In New York City the zoning plan has prevented the waste of sound buildings to the extent of millions of dollars every year.

Some one will say that zoning would fix the character of every part of a city or village so that it could not grow or change. On the contrary, the zoning plan provides for the best sort of growth. The zoning maps can always be changed,

but before the change is made hearings must be held by the council, and if a written protest is filed more than a majority vote is usually required to make the change. These changes come about, however, because they are quite universally desired and not because a factory owner or a business enterprise invades a residence district. Property owners are given something to say concerning the alteration of the character of their neighborhood. When a neighborhood becomes more valuable for business than it is for residence, the property owners are willing to have the map changed from a residence district to a business district. In every city and village where zoning is established these protective regulations are operating quietly and effectively and are producing orderliness of growth instead of constant injury to investments in buildings.

Zoning Better Than Private Restrictions

Zoning laws and maps are established by municipalities under the police power for the health, safety and general welfare of the community. They are enforced by officials and upheld by the courts like requirements of a board of health or rules of a fire department to prevent fires. Private restrictions, on the other hand, are contracts usually contained in deeds made by the original developers. They are not enforced by officials but by private parties. Private restrictions are not limited to health, safety and the general welfare. They can be imposed as a matter of contract for esthetic purposes such as peaked roofs, or to require one-family detached houses or houses costing not less than a given amount.

Private restrictions usually apply only to select residential development. They do not often protect business localities or the homes of people of small means. If the restrictions are for twenty or twenty-five years, as is usually the case, trouble comes when they expire. An occasional house will be torn down and an apartment house put up or a store may creep in. Sometimes the developer himself will keep eligible corner lots out of improvement so that he can put up an apartment house or store after the restrictions expire. Owners let their houses run down just before the restrictions expire so that they can use them for apartments or stores. If private restrictions are indeterminate, the courts are prone to call them void if there is a change in the neighborhood. On the whole restrictions produce a great deal of litigation and do not permanently affect the entire community. It should not be thought that, if a village or city is zoned, private restrictions are entirely out of place. They can be created exactly as before and for certain purposes they have a very great usefulness. They do not interfere in the slightest with the zoning and a zoning ordinance should never make any reference to private restrictions. They simply have nothing whatever to do with each other, and the two methods of regulation can proceed hand in hand.

The zoning, however, is a great improvement on private restrictions because it protects home districts not only of the well to do but of those of moderate means. It protects retail streets as well as home districts. It protects localities of light industry so that clean young women can work among clean surroundings. Zoning is permanent until there is a general demand for the alteration of the zoning of a locality. Private restrictions cannot be altered because some one or two will always object. This is not so with the zoning regulations. They can be altered as the municipality grows or changes.

Values of Homes Made More Stable

These articles aim to show how all of Long Island or at least the westerly half can be zoned if the people of the various localities care to adopt the zoning plan. The boroughs of Brooklyn and Queens are already zoned. Experience under the zoning law for six years in the outlying parts of these two boroughs has shown that business streets are made better for business and residence streets are made better for residences. Trolley car streets, like Flatbush, Church, Liberty, Jamaica, Myrtle and Jackson aves., and great traffic thoroughfares, like Rockaway blvd., Queens blvd., and Merrick rd., are designated for business.

The home localities for which these business streets are arteries are designated as residence. Formerly a lot owner on any residential street could file his plans for a store with the building department and the building department was compelled to issue a permit. Since the zoning went into effect the building department refuses a permit for a store in a residence district, and if a home owner tries to change his residence into a store the fire department on complaint will prevent it. The result is that the occasional grocer, butcher or public garage does not invade the newly-developed district of homes, but is compelled to stay on the business street. Before the zoning there was a temptation for him to short-circuit the district and try to get ahead of his business competitors by finding a corner lot in the heart of the residence section.

If he met with some success, another business would come in on another corner, projecting its plate glass front to the street line and cutting off the uniform front yards of the private homes. Business streets are always within from two to six minutes' walk from every part of a residence district. Both business men and the home owners like the zoning plan. The business men like it because they know that if they have a good location

(Continued on page 232)

Street Sprinkler Wanted

Any city having an old horse drawn street sprinkler for sale will please communicate with C. M. Burchell, Wheatland, Cal.

Street Spinkler Wanted

Preferably with flushing apparatus attachment.

Any city having a street sprinkler wagon for sale will please communicate with W. H. Gibson, Town Clerk. Newman, Calif.



ADDRESS OF H. A. MASON

Secretary Treasurer of the League In opposition to Initiative Measure No. 10.

MR. MASON: Mr. President, I think I might start out by being equally frank with my friend, Judge Hall, of Richmond, in stating the origin of this particular amendment. I happen to be somewhat posted in regard to it, and I will say that it originated in the San Joaquin Valley, the territory owned and controlled by The San Joaquin Light and Power Company. Its purpose was to retaliate against the City of Los Angeles because of the temerity of that city in including into its territory and intending to establish a hydro-electric power system by which it is proposed to serve the people of southern California, and, incidentally, the people of the San Joaquin Valley, in respect to the excess power generated, at lower rates than furnished by the San Joaquin Light and Power Company. The purpose of it very plainly is to discourage public ownership of power and plants such as would be compelled to pay taxes under this amendment.

I am opposed to it, not for that reason, however, but because it is fundamentally unsound. The present system of taxation by which state revenue is raised by taxing the gross income of these concerns, water, electric, gas, and transportation companies, is fundamentally unsound, because it imposes a tax upon something which is essential to human life and comfort. In imposing that tax, you make those things which are essential to ourselves more costly, more difficult to obtain, and which require a greater expenditure of human energy to obtain. As a doctrine of taxation, it is false, unscientific, and uneconomic. What is proposed by this amendment is to extend that system of taxation, and it is my view that before a system of taxation should be extended, it should be

fundamentally sound and have within it elements of justice. I do not believe the present system to be practical, I do not believe it to be sound; therefore I say it should not be extended.

Our friends of the power companies have rather mistaken their remedy. They should have gone to the extent of attacking the present system of taxation, and offered a substitute, and in that I am quite certain all of us would heartily join with them in their efforts to accomplish that result.

I am opposed to it for another reason, however, and that is this: while this amendment is aimed particularly at Los Angeles, and while it might be possible that the city of Los Angeles could afford to pay the tax which the State Constitution imposes upon electric works, nevertheless there are fifteen or twenty other smaller cities in the state upon which this tax would be a burden. They are conducting operations now upon a very small margin. And to impose an additional tax of five or six per cent upon their gross earnings would perhaps put them on the other side of the ledger.

That would mean that each municipality would have to pay a tax indirectly into the State treasury, tax themselves for the purpose of supporting the state, a procedure, which, when you come to analyze it, means that you are simply taking out of one pocket and putting into the other. The situation in San Francisco would be this: We would be compelled to pay a tax upon our municipally owned street railroads. We are running that establishment now on a pretty close margin. We have maintained, during all of these years, a five cent fare. We are setting aside about fifteen per cent to the credit of our depreciation fund. The imposition of this tax would reduce that.

(Continued from page 222)

it is not the right thing to say in this body, but anybody that wants to work the patronage of a city for political purposes, let him go at the budget—that is the way to do it—that budget will show him where the patronage is, and how to get it. It will show him that—and it will show the other man how to prevent the thing also.



BEAUTIFUL LAWNS

Easily and Economically Kept Beautiful with our Modern
Mowing Machinery

MOWERS FOR HAND-HORSE-POWER OR TRACTOR USE

H. V. CARTER MOTOR CO.

52 Beale Street

San Francisco

N. CLARK & SONS

INCORPORATED 1889
Manufacturers of

ARCHITECTURAL TERRA COTTA, PRESSED BRICK VITRIFIED AND TERRA COTTA PIPE

HOLLOW TILE FIRE PROOFING FIRE BRICK TILE AND KINDRED CLAY PRODUCTS

Office: 112-116 Natoma St. WEST ALAMEDA SAN FRANCISCO

OLD TYPE ROADS COST MOTORIST \$300,-000,000 A YEAR FOR GASOLINE

Estimates of automobile manufacturers place the number of cars of all types in operation in America, last year at more than 11,000,000. One in every ten individuals in the United States is represented, comparatively, as an owner.

Almost every family, figuring on the same relative scale, would be affected by economic changes in motor operation. For that reason the lower cost of fuel consumption made possible by hard surfaced highways is of dominant interest.

Actual tests made by several states show that the following difference in fuel consumption exists on three existing types of roads:

Cost per ton mile for gasoline at 24 cents a gallon

45-	
Dirt road	3.017
Gravel road	.011:
Concrete road	0077

Thus the difference in pull required on concrete pavement means an actual saving in gasoline of \$.0038 for every mile travelled.

Almost all motorists average 140 miles a week, or 20 miles a day. The majority of cars are of the "light-type" and one ton weight can be taken as a fair average for the car itself.

This would mean that in a week the car owner would save about 54 cents on gas and in a year's

time would save \$27.67 if it was possible for him to drive on nothing but concrete pavement all the time.

This does not take into account the long stretches of dirt road which cost twice as much to drive over as on concrete.

Thus it is fair to say that old type highways are costing the American motorist more than a quarter of a billion annually on his gasoline bill.

He can drive 31 miles per ton per gallon on concrete but only 21 miles per ton per gallon on gravel and 14 on dirt.

San Francisco: On May 21st the Financial Committee filed its Budget Recommendations for the year 1923-1924 with the Board of Supervisors, recommending appropriation in the total amount of \$25,563,302. The tax rate to meet this amount is fixed at \$3.47—the same as last.



American-LaFrance Fire Equipment Mounted on Ford Chassis

The Favored
Fire Protection of Most
Small Communities

This sturdy apparatus increases the range of protection over that covered by hand or horse drawn equipment. Any member of the fire department who carl drive a Ford can operate this car.

The chemical tanks are identical with those used on the largest fire fighting trucks, and are connected by a by-pass system which permits a steady flow of chemical, one tank being recharged while the other is being discharged. Completely equipped with all accessories necessary to successful fire fighting.

Produced by the World's Oldest and Largest Manufacturer of Fire Apparatus

<u> American Jafrance Fire Engine Company, Inc.</u>

151 NEW MONTGOMERY ST. SAN FRANCISCO, CAL.

1302 WASHINGTON BLDG. LOS ANGELES, CAL.

Are Your Streets Being Improved?

If so then you should consider the advisability of insuring your proceedings, your improvements and your assessment to comply with all the technicalities and intricacies of the law.

Then is the time you want expert advice, forms, bonds and books that agree with the street laws including all amendments.

Years of specializing on this phase of the law enables us to properly and legally assume responsibility for the correct fulfillment of your order.



46 years of continuous service to municipalities is our guarantee.

That's good insurance.

A. CARLISLE & CO.

(Continued from page 227)

on the business street, they are protected against competitors locating here and there in the heart of the residence district, and the home owners like it because the private character of their street is preserved. As a rule shoppers are perfectly willing to walk from two to six minutes to a street where they can find all kinds of stores. The value of small homes and small stores are made more stable. Mortgages are more easily procured. Home building is encouraged. Home owners take more pride in their homes. They form taxpayers associations to help enforce the zoning law. Anything which creates private homes and preserves their character is helping to provide better citizenship.

Protection B Zoning

Home localities, whether made up of apartment houses or smaller units, are protected by the zoning against stores, garages and factories, but in addition localities of one and two-family houses are protected against the invasion of apartments. E districts, as shown on the area map, allow only 30 per cent of the lot to be covered by the building. This requirement produces one-family detached houses in most cases, although a two-family house with small rooms can sometimes be crowded in. The original map showed a considerable area of E districts, but many localities, especially new suburban localities, that were not placed in E districts have petitioned the Board of Estimate to be changed from C or D to E in order to prevent apartment and block houses.

No one would think of claiming that apartment and block houses are not just as important as detached houses. Enormous areas in both boroughs are set aside where apartment and block houses can be built. It cannot be denied, however, that detached homes, which usually set back 20 or 30 feet from the street, are

CITY ENGINEER WANTS POSITION

Man of fifteen years experience on municipal work in Massachusetts and who has served as City Engineer for three years in a California city desires position as City Enneer. Will consider any location in California.



Inquire Pacific Municipalities, Pacific Building, S. F.

GRIFFITH COMPANY

Owners of
FAIRCHILD-GILMORE
WILTON CO.

Paving Contractors

Rooms 500-504

Los Angeles Railway Building

Los Angeles

EDWARD GLASS

UNDERWOOD BLDG. SAN FRANCISCO

injured by the invasion of sporadic apartment and block houses. There is a right place for an apartment house as well as a wrong place. Bedford, Ocean and 4th aves. in Brooklyn and the Astoria and Jackson Heights sections in Queens, all near the five-cent rapid transit and on broad streets, would seem to be the natural sites for apartment houses. But if it were not for the zoning, no private home section within a 45-minute ride of lower Manhattan would be safe from invasion by apartment houses in wrong places.

I will choose Flushing as an example of the wrong place for apartment houses. Flushing is probably the most beautiful and uninjured old settlement in Greater New York. It is made attractive by multitudes of large and rare shade trees. The detached homes are particularly interesting and charming. No apartment builder would think of going there if it were not a locality of private homes and beautiful gardens. If Park ave., New

York, was vacant land, it would be built up with apartment houses. But if Flushing were vacant land no anartment house builder would go so far from the center of the city. If Park ave. was 90 per cent built up with apartment houses, the other 10 per cent would also be rapidly built up with the same sort. But if Flushing were 90 per cent built up with apartment houses, not another apartment house would be built. The only reason that apartment houses would go to Flushing is to exploit the private character of this beautiful section and bring the builder increased rents because his tenants could live among surroundings of a private nature, which the apartment builder had done nothing to create.

The zoning commission placed a large part of Flushing in the E district in order to preserve its remarkably beautiful and unique character. There is no doubt that, if apartment houses should be largely prevented, there would be an additional value to all vacant land for fine

BURNS & McDONNELL

Engineering Company
CONSULTING ENGINEERS

Water Works, Sewerage and Sewage Treatment, Lighting Appraisals, Rate Investigations
Expert Testimony and Gas Works

FREE BOOKLETS-How to Conduct Bond Campaigns, Municipal Ownership Reasons, etc.

LOS ANGELES, CALIF.

Marsh-Strong Bldg.

Interstate Bldg.



GLADDING, MCBEAN & CO.

USE PERMANENT PIPE FOR IRRIGATION DRAINAGE CULVERTS SEWERAGE

CROCKER BLDG. - SAN FRANCISCO WOR'KS-LINCOLN, CAL. private homes. The then Board of Estimate decided, however, on the petition of a number of Flushing real estate operators to change nearly all of the area from E to C, and the maps were so adopted. Land owners in Flushing ought to petition the Board of Estimate to change most of their fine sections to E, or better yet to F. If enough apartment houses go up in Flushing, it will destroy the very character which invited the first apartment house, and the owners of vacant land will find that values have gone down

The example of Flushing can be applied to many Long Island localities. There is to-day 20 times as much land within three-quarters of an hour's ride of lower Manhattan available for apartment houses as will be built upon for the next 20 years. To invite the building of exploitation apartment houses where private villa homes ought to be encouraged is a mistake.

Many outlying home districts in Kings and Queens should petition the Board of Estimate to be placed in an F district. This is a newly established district which requires two side yards and a setback of 15 feet from the street line. Its regulations make it a better district than E for the protection of one-family homes. It is equally suitable for people of moderate means and the well-to-do.

The Zoning of Villages

The zoning plan consists of an ordinance giving the regulations and requirements of the various districts and the zoning maps which show the districts. New York City has three zoning maps.

The height map show allowable heights of new buildings. The districts range from three-fourths the width of the street to two and one-half times such width. After the building has been constructed on the street line to the allowable height it may set back like a tower. Thus the zoning has caused the pyramidal buildings which are fast becoming such a unique and interesting feature of Manhattan.

The area map shows allowable bulk or area of new buildings. The districts on this map range from A, 100 per cent, through B, C, D, E and F, the latter of

Sacramento Capital National Bank Bldg. San Jose Bank of Italy Bldg. Los Angeles Fay Building

WILLIAM DOLGE & CO.

Certified Public Accountants Municipal Accounting

Audits, Examinations and Special Examinations. Accounting Procedures for Municipal Utilities. Budget Systems Installed

Telephone Sutter 697

369 Pine Street

San Francisco, Cal.



No Car Is Quite Itself without a Concrete Road

What makes a "crack" train? The roadbed as much as the rolling stock.

So with your automobile. Any car is a *better* car on a good road.

The car with the highest gas mileage has a *higher* mileage on Concrete.

The car with the quickest "pick up" picks up quicker on firm, unyielding Concrete.

The best non-skid tire holds *better* on the gritty Concrete surface.

The car with the lowest depreciation has a *lower* depreciation on Concrete.

Motorists know these are facts—and motorists, if they insist, can get the kind of roads they want.

Our Booklet R-3 tells other interesting things

FORTLAND CEMENT ASSOCIATION

785 Market Street SAN FRANCISCO LOS ANGELES

A National Organization to Improve and Extend the Uses of Concrete

Offices in 22 Other Cities

12 Years' Service and It Still Has LIFE!

RECENTLY occasion rose for tearing out a piece of roadway here in Los Angeles County which had been laid more than 12 years ago. It was macadam, bound with Gilmore Road Oils.

Examination showed that, in spite of the 12 years hard usage and exposure to the elements, the asphaltic binder in the Road Oils still showed strong adhesiveness—elasticity—LIFE. It was still doing its duty and doing it well.

In the hands of men who know how to build a road to meet the traffic requirements made upon it, Gilmore Road Oils are unequaled for permanence as well as economy.

"At Your Service For Better Roads"

Gilmore Products

A. F. GILMORE COMPANY Road Oils—Fuel Oils

GILMORE
PETROLEUM CO.
Gasoline—Motor Oils

700 Van Nuys Bldg., Los Angeles

which allows only 25 per cent of the lot to be built upon.

The use map divides the entire city into three kinds of districts—residence, business and unrestricted. These districts are shown by marking specific streets.

The zoning of villages can, however, be shown on either one or two maps. The subject of height becomes less important in villages and small cities. Many of the New Jersey villages have only one zoning map. The requirements of height and area are rolled into a single district designation. It is generally considered that the use districts should be as few as possible, in order that the broad distinction will appeal to the courts as justifying themselves under the police power. It will be desirable, however, for Long Island villages to consider breaking up the unrestricted district into light industry and heavy industry districts. There is a great deal to be said about protecting the districts of light industry, where girls are employed, from invasion by heavy industries which emit noise, dust, fumes or vibration.

Appeals Board Valuable

Every city in New York is now empowered by an amendment to the general city law to adopt a zoning plan and estab-

lish a board of appeals. The board of appeals is a valuable help in the administration of a zoning plan, because it is given power to vary the law as to the requirements of specific buildings in order to prevent unnecessary hardship. Thus it acts as a safety valve and prevents possible injury in the exceptional cases that are almost sure to arise. All villages in New York State are also empowered to adopt the zoning plan, but the village law does not yet allow the creation of boards of appeals in villages. Such a board is desirable even in villages, and undoubtedly the law should be amended so that they can be established. It must be conceded, however, that they are not so much needed as in large cities, because a village Board of Trustees can from time to time adjust the zoning law and maps to meet these exceptional situations.

When a village desires to adopt the zoning plan it is well for the Board of Trustees to appoint a commission to prepare the ordinance and maps. This commission can include the head of the Board of Health, the head of the fire department; and the village engineer. Other suitable officials might be added. Citizen members should help to make up the commission. The remarkable

WE SOLICIT MUNICIPAL ORDERS FOR



VITRIFIED CLAY SEWER PIPE AND FERGUSON SEGMENT SEWER BLOCKS THE PACIFIC CLAY PRODUCTS. INC.



600 AMERICAN BANK BLDG.

LOS ANGELES, CALIFORNIA

FIRE HOSE

The GUTTA PERCHA & RUBBER MFG. CO.

34 FREMONT ST., SAN FRANCISCO, CAL.

spread of zoning has brought to the front specialists who are known as zoning consultants. It is a good plan to consider engaging the services of one of these consultants. The preparation of the ordinance and maps is not so simple as it might seem at first. New York City gave six years to the study and preparation. Although the New York City zoning has met with the favor of the courts because of the greatest care was taken to keep within the scope of the police power, yet many hastily prepared zoning ordinances throughout the country have been criticized by the courts, and in some cases virtually set aside because they produced so many situations that were arbitrary, partial or confiscatory. The police power cannot be invoked for anything except health, safety, morals and the general welfare, and a village will go astray if it makes its zoning like private restrictions. Neither can one village copy another village.

villages or cities are alike. Each muststudy out its own zoning plan for itself. It is more costly to litigate over a poor plan than it is to get a sound plan in the beginning. On this account it is worth while considering the employment of one of the zoning consultants.

Frequent Hearing Needed

Frequent hearings must be held. The people of each section must be stimulated to zone themselves. Sometimes zoning plans are prepared by officials without consultation with the property owners, and after they have prepared what they think is a good plan they spring it on the people and the people rise up against it. The best way is to begin with finding out exactly what the propety owners want. especially the owners of small homes and small stores. Then the officials ought to go a long way in zoning the village the way the property owners want it zoned. They usually know their own business better than anyone else. Most villages

California Corrugated Culvert Co.,

West Berkeley Calif.,

Gentienen:

The Armso (American Inpot Iron) culvert which was installed by me while Supervisor of Siskiyou County State of Chilfornia in the county road mear Montague is in perfect condition and giving service to-day.

Forcer Supervisor Siskiyou County California

Pares Supervisor Siskiyou County California

Date of Installation, SAPTEMBER, 1998.

have already zoned themselves in a general way. The zoning ordinance should preserve the integrity of its natural zoning so as to prevent future injury. Zoning is not a reform method to make people do with their property what they do not want to do. Each locality will speak for itself and officials will do well to follow the instructions of its property owners. The New York City zoning plan covering five boroughs was passed without a dissenting vote and without the protest of any organization in the city. The reason was that the property owners of the city did the zoning. Since its adoption the property owners have gradually caused the protection of the law to become more effective by petitioning the Board of Estimate.

Need Amendment Permitting Town
Zoning

Long Island villages are authorized to adopt a zoning plan, but no sufficient law has yet been passed by the State Legislature which allows the zoning of towns outside of incorporated cities and villages. One of the needs of Long Island as well as the rest of the State is an amendment to the town law which will allow zoning. Enormous areas in Nassau and Suffolk Counties, many of them developed with the best class of residences, lie in towns outside of villages and cities. These areas need zoning for their own protection and orderliness. They will also find as zoning extends more and more to villages that uses that are not wanted in villages will be regulated out of the village into the unincorporated territory. Some New Jersey villages and small cities have already shown a tendency to zone themselves so that objectionable buildings will be forced into the outlying areas. Towns must protect themselves against such unwarranted action. The zoning of a village should be harmonious with the

PIPE TANKS CULVERTS

For PERMANENCY use STEEL For OUALITY buy "WESTERN"

We furnish Pipe from 1-16" to 1" thick in any diameter.
WESTERN makes STEEL TANKS for all purposes.
Designed, Fabricated, Erected anywhere on the Pacific Coast.

WESTERN CORRUGATED CULVERTS will give service heretofore unknown, as WESTERN CULVERT METAL is of unequaled rust-resisting, non-corrosive Quality. You will find nothing but "WESTERN" Culverts under the State Highways.

Let Us Figure Your Specifications

Western Pipe & Steel Co. of Cal.

444 Market Street SAN FRANCISCO 1758 N. Broadway LOS ANGELES

FRESNO

TAFT

BAKERSFIELD

zoning of the surrounding township. Citizens and officials of Nassau are even now studying how a comprehensive plan of zoning the entire county can be brought about. The passage of the constitutional amendment allowing an alteration of the county government of Nassau and Westchester makes possible an improvement of county government, which will undoutedly be able to cope with this question, but amendments to the law will be needed.

Perplexing questions arise. If county officials impose the zoning on separate townships, the property owners in the towns are apt to say that this is not home rule. On the other hand the facilities of the proposed new county government will be much superior to the facilities of a single town. The county could retain consultants and the best engineers. It could have the best legal advice to prevent pitfalls that

would invite court attack. If the towns zoned the areas outside of incorporates villages, the work is apt to be done badly. In other States the zoning of townships has been done badly and dangerously because skillful advisers were not employed. In some cases the courts have punctured the zoning plan. Nassau County must probably decide for itself whether town zoning will be done by home rule and done rather badly or done by the future county authorities and done well.

Another problem is how to zone the belt of boundary territory that is half within an incorporated village or city and half within an unincorporated town. This boundary belt, usually about one mile wide, should be zoned as an entity. The town will not want the village to push its refuse over on to its side, nor will the village want the town to push its refuse over into the village.

(To be continued in our July issue)



TRIDENT METERS

Split Case Meters for Warm Climates
C. I. Breakable Frost Bottoms for Cold Climates
Hot Water and Oil Meters. Crest Meters for Large Flows
Compound Meters for all streams. Large and Small

TRIDENT DISC

Sold 158,000 in 1921

A record unsurpassed in the history of

MANUFACTURED BY

NEPTUNE METER CO.

NEW YORK

PACIFIC COAST BRANCHES AT PORTLAND, SEATTLE, SPOKANE, SAN DIEGO

LOS ANGELES OFFICE AND WAREHOUSE 701 East Third Street



TRIDENT CREST

Pacific Municipalities

A Monthly Review of Municipal Problems and Civic Improvements

OFFICIAL ORGAN OF THE LEAGUE OF CALIFORNIA MUNICIPALITIES



HOTEL DEL CORONADO

LEADING ARTICLES IN THIS ISSUE

CORONADO PLANS PAGEANT	245
HOW TO MAKE GOOD CONCRETE	247

SIX YEARS' ACCOMPLISHMENTS IN ALAMEDA, CALIFORNIA, UNDER THE CITY MANAGER FORM OF GOVERNMENT. By Clifton E. Hickok. City Manager, Alameda...

261

Publication Office
Pacific Building, San Francisco, Cal.

Two Dollars a Year Single Copy 25 Cents

1923 Edition Enlarged and Revised

Street Improvement Laws of California

By Wm. J. Locke

Executive Secretary, League of California Municipalities

AT the last session of the legislature many important changes were made, vitally affecting all our street laws, especially the two most universally used, the Improvement Act of 1911, and Improvement Bond Act of 1915.

We have also added three entire acts to our book as we find that the Street Improvement Act of 1913, and the Street Opening Act of 1903 are extensively used, especially in the southern part of the State.

The following acts are set forth in full, amended to date and containing valuable court decisions.

Improvement Act of 1911. Improvement Bond Act of 1915. Vrooman Street Act of 1885. Street Opening Act of 1889. Street Opening Bond Act of 1921. Change of Grade Act of 1909. Street Improvement Act of 1913. Street Opening Act of 1903. Street Opening Bond Act of 1911.

Ready for distribution about August 15, 1923.

A copy of this book should be in the hands of every City Clerk, City Attorney, City Engineer, Superintendent of Streets, City Treasurer, and City Manager.

Order your copy now, to assure prompt delivery.



A. CARLISLE & CO.

251 BUSH STREET SAN FRANCISCO, CAL.

This is the only street book issued under the supervision of Wm. J. Locke.

Pacific Municipalities

AND COUNTIES

OFFICIAL ORGAN OF THE LEAGUE OF CALIFORNIA MUNICIPALITIES

Entered as second-class matter March 22, 1913, at the Post Office at San Francisco, California, under the act of March 3, 1879.

TWENTY-SIXTH YEAR

No. 7

VOL. XXXVII

Editors	H. A. MASON and WM. J. LOCKE
Editorial and Business Office	Fifth Floor, Pacific Building, San Francisco
Advertising Rates	ON APPLICATION
Address all Communications to "PACIFIC M	MUNICIPALITIES," Pacific Building
San Francisco,	California
JULY,	1923
NOTICE—Every city belonging to the League of this magazine for each of its officials without of Secretary.	
A. Carlisle & Co., Printe	ers, San Francisco

CONTENTS

CORONADO FLANS FAGEANI	2(11)
HOW TO MAKE GOOD CONCRETE	247
WHAT THE CITIES ARE DOING.	258
SIX YEARS' ACCOMPLISHMENTS IN ALAMEDA, CALIFORNIA, UNDER CITY MANAGER FORM OF GOVERNMENT.	
By Clifton E. Hickok, City Manager, Alameda	261
THE DEMONSTRATION PROPORTIONAL REPRESENTATION ELEC-	
TION AT CHICAGO	265
NUMBER, AGE AND EXPERIENCE OF CITY MANAGERS	272
THE PUNDAMENTALS OF TONING (Cart Cart Cart Cart Cart Cart Cart Cart	

By Edward M. Bassett.....

LEAGUE OF CALIFORNIA MUNICIPALITIES

Organized 1897 Affiliated with the Bureau of Municipal Reference, University of California

President, FRANK C. MERRITT, Assistant City Clerk of Oakland First Vice-President, FRED C. WHEELER, City Councilman of Los Angeles First Vice-President, FRED C. WHEELER, City Councilman or Los Angeles Second Vice-President, NoRMAN E. MALCOLM, City Attoracy of Palo Alto Secretary-Treasurer, H. A. MASON, Bond and Ordinance Expert of the City of San Francisco Executive Secretary, WM. J. LOCKE Headquarters: Facific Building, San Francisco Official Printers: A. Carliale & Co., San Francisco

INFORMATION BUREAU

The League of California Municipalities maintains in connection with the Secretary's Office. Bureau for furnishing city and town officials with information on municipal artists, and loaning opies of new ordinances and specifications. Officials are urged to make a free use of this lureau. Kindly send a self-addressed stamped envelope in all cases.

Members of the California League of Municipalities

Alameda	Covina	Jackson	Orange	San Rafael
Albany	Corte Madera	Kennett	Orland	Santa Ana
Alhambra	Crescent City	King City	Oroville	Santa Barbara
Alturas	Culver City	Kingsburg	Oxnard	Santa Clara
Amador City	Daly City	Lakeport	Pacific Grove	Santa Cruz
Anaheim	Davis	Larkspur	Palo Alto	
Angels	Delano	La Mesa	Pasadena	Santa Maria
Antioch	Dinuba	La Verne	Paso Robles	Santa Monica
Arcadia	Dixon	Lemoore	Patterson	Santa Paula
Arcata	Dorris	Lindsay	Petaluma	Santa Rosa
Arroyo Grande	Dunsmuir	Livingston	Piedmont	Sausalito
Auburn	East San Diego	Livermore	Pinole	Sawtelle
Avalon	El Cajon	Lodi	Pittsburg	Sebastopol
Azusa	El Cerrito	Lompoc	Placerville	Selma
Bakersfield	Elsinore	Long Beach	Pleasanton	Sierra Madre
Banning	El Segundo	Los Angeles	Plymouth	Sisson
Beaumont	Emeryville	Los Banos	Point Arena	Soledad
Belvedere	Etna	Los Gatos	Pomona	Sonoma
Benicia	Eureka	Loyalton	Porterville	Sonora
Berkeley	Exeter	Lynnwood	Potter Valley	South Pasadena
Beverly Hills	Fairfield	Madera	Red Bluff	South San Francisco
Biggs	Ferndale	Manhattan Beach		St. Helena
Bishop	Fillmore			Stockton
Blythe	Fort Bragg	Manteca	Redlands	Suisun
	Fort Bragg	Maricopa	Redondo Beach	Sutter Creek
Brawley Brea		Martinez	Redwood City	Sunnyvale
Burbank	Fortuna Fowler	Marysville	Reedley	Susanville
		Mayfield	Rialto	Taft
Burlingame	Fresno	Merced	Richmond	Tehachapi
Calexico	Fullerton	Mill Valley	Rio Vista	Tracy
Calipatria	Gilroy	Modesto	Riverside	Tulare
Calistoga	Glendale	Monrovia	Roseville	Turlock
Carmel-by-the-Sea	Glendora	Montague	Ross	Ukiah
	Gridley	Montebello	Sacramento	Upland
Chino	Gustine	Monterey	Salinas	Vacaville
Chowchilla	Hanford	Monterey Park	Sanger	Valleio
Chula Vista	Hayward	Morgan Hill	San Anselmo	Vanejo Ventura
Claremont	Healdsburg	Mountain View	San Bernardino	Venice
Clovis	Hemet	Napa	San Bruno	Visalia
Coalinga	Hercules	National City	San Diego	Wainut Creek
Colfax	Hermosa Beach	Needles	San Fernando	
Colton	Hollister	Nevada City	San Francisco	Watsonville
Colusa	Holtville	Newman	San Gabriel	Watts
Concord	Honolulu	Newport Beach	San Juan	Wheatland
Corcoran	Huntington Beach	Oakdale	San Jose	Whittier
Corning	Huntington Park	Oakland	San Leandro	Willits Willows
Coronado	Hyde Park	Oceanside	San Luis Obispo	Winters Woodland
Compton	Imperial	Ojai	San Marino	Yreka Yuba City
Corona	Inglewood	Ontario	San Mateo	Total 24

Associate Members-Oregon: Astoria, La Grande



No Excuse for Bumpy Streets

There is a pavement—Concrete—that does not develop bumps or ruts even under the heaviest traffic, but is rigid permanent, and has maintenance built into it.

Cities and towns throughout the country are paving with Concrete because of these qualities—and because it is skidproof, clean and comfortable to ride on.

Our Booklet R-4 on Concrete Streets tells of the experience of these towns. Write for your copy, sent free.

PORTLAND CEMENT ASSOCIATION

785 Market Street, San Francisco 548 South Spring Street, Los Angeles

A National Organization to Improve and Extend the Uses of Concrete

Offices in 22 Other Cities

Official Call

to the

Twenty-fifth Annual Convention

of the

League of California Municipalities

TO ALL COUNCILMEN AND OTHER OFFICIALS

OF THE CITIES AND TOWNS OF CALIFORNIA:

Your attention is respectfully called to the Twenty-fifth Annual Convention of the League of California Municipalities, which is to be held this year in the City of Coronado, September 10–14, 1923.

Every city and town in California is urgently requested to send representatives to this meeting. If possible delegates should be sent to each section of the League to the end that the information and experience of sister cities be profited by to the fullest extent. Many matters of great interest to the municipalities will be fully discussed. The very important topics of zoning, set-back lines, building codes, and paving will be among the subjects of present interest to be discussed.

The people of Coronado are making elaborate preparations for the occasion, in order that it may not only be enjoyable for those who attend but also result in much good to the cause of better Municipal government. Let us show our appreciation of their efforts by making this the biggest convention in the history of the League.

Respectfully, Frank C. Merritt.

Wm. J. LOCKE,

Executive Secretary,

H. A. Mason,

Secretary-Treasurer,

Pacific Municipalities

AND COUNTIES

OFFICIAL ORGAN OF THE LEAGUE OF CALIFORNIA MUNICIPALITIES

Entered as second-class matter March 22, 1913, at the Post Office at San Francisco, California, under the Act of March 3, 1879.

Coronado Plans Pageant in Which Total Eclipse of Sun Will Bring Crisis

To Be Held in Connection with the Twenty-Fifth Annual Convention of the League of California Municipalities, September 10-14, 1923

Preparations for the "Fete of the Sun," the great pageant drama to be presented in Coronado on the occasion of the total eclipse of the sun, Sept. 10, will be made with all possible speed to insure the spectacle being entirely ready for presentation on the day of the eclipse. The offices of the Merchants' association of Coronado, under whose auspices the pageant is to be staged, are buzzing with activity.

In the hope of bringing thousands of visitors to Coronado and San Diego on September 10, to view the eclipse under the most favorable circumstances and at the same time to see the great pageant drama, stenographers and publicity writters are busily sending data on the phenomenon and advertising material on the pageant to organizations and newspapers in more than 300 western cities.

ECLIPSE PART OF PLAY

"The Fete of the Sun" is perhaps the most original undertaking ever entered upon by a community. The phenomenon of the eclipse is so inspiring and the gigantic forces of nature concerned are so majestic that any human effort to compare with them must seem almost ridiculous. Though this be self-evident, there still remains the possibility of presenting a spectacle which will revive the impres-

sions that this miracle has made on former occasions.

The total eclipse of the sun with the effect of a "darkness made visible" has had striking results in ancient times. To many it has seemed that the end of the world was approaching; that disaster and catastrophe of unlimited dimensions were about to engulf the world. To others it has been a symbol of Almighty mercy, which after a great darkness brings back the light. After the winter, the spring; after the storm, the rainbow and after the gloom of the eclipse, the light of day.

PAGEANT ON CLUB GROUNDS

Nowhere in the United States will the totality be so complete and of such duration as in Coronado and San Diego, and arrangements have been made to produce a mammoth pageant on the grounds of the Coronado Country club. The theme of the spectacle will be to revive the impressions, rites and beliefs of ancient times. The play will be in three episodes. First, the dissipation and careless acceptance by man of the blessings of Nature; second, man's fear and repentance, and the removal of all light; third, the forgiveness and restoration of the favor of the Almighty.

The scenes are laid in a festival place of a great city of the middle ages. Revelry, dancing and careless dissipation hold sway with no thought beyond the immediate present.

The material climax is reached when the arrogant king orders the massacre of the older senators who oppose his excessive and extravagant wishes. The king's daughter pleads in vain for a more kindly and humane decree and implores her lover, the young captain of the king's guard, to refuse the execution of her father's order. For her interference with a royal command, she is sentenced by the infuriated monarch to die in the torture chamber of the royal prison.

PROPHET APPEARS

A prophet, a weird soothsayer of the royal household, appears and forbids the punishment and murder. He calls upon the heavens to support him. All eyes are turned to the sky and the gradual darkening of the sun is observed. In haste the festivities cease and with solemn ritual, a mighty processional of supplicants approach the high altar seeking divine mercy. The darkness deepens. The prophet stands alone in devout entreaty to the elements. In chaos and fear the terrified people determine to sacrifice the king and his daughter, that the anger of the gods may be assuaged.

The multitude, robed in black, move sullenly to the sacrificial altar. Her and there torches are lit as the dreadful wail and the music of lamentation is heard. The total eclipse is consummated. The king and his daughter must give their lives that their people may live.

For three minutes during the time of total darkness, the whole spectacle will remain in statuesque repose, without movement, without sound,—a picture made desolate by the departure of the light of day. The prophet moves slowly to the condemned group as the shadow slowly departs, the light appears as the

soft strain of mysterious music give hope. The pulse quickens and a thrill of joy is experienced as a band of snowy white messengers proclaim that the mercy of the Creator is infinite. In a happy and satisfied frame of mind the citizens return to their rejoicing with a fuller appreciation of the miracles of nature.

MUSIC BY STEWART

Garnet Holme is the author of the pageant as it will be produced. He has been most before the public of the Pacific coast as an author and producer of outdoor plays and pageants in the natural beauties of the state. The Mountain play, "Tamelpa," on Mt. Tamalpais, the Desert play at Palm Springs, the Mission play at Carmel, the Redwood play in the National Sequoia park were all part of his creative work.

Mr. Holme was for seven years associated with the University of California in the Greek theatre producing Shakespearean plays, old English comedies, translations from the Sanskrit and many of the classics in pageantry. He will come to Coronado immediately upon the presentation of his new Mission pageant to be produced at the Sonoma mission.

The music for "The Fete of the Sun" will be in the hands of Dr. Humphrey J. Stewart, who needs no introduction to the people of Coronado and San Diego. Among the ten most worthy musical compositions of the past year, an operatic gem of his composing won highest praise. Dr. Stewart will assemble a massive symphony orchestra for the occasion and will direct an original score for "The Fete of the Sun."

The entire project for a fitting and an appropriate celebration to commemorate the total eclipse was brought to light by George S. Best, general manager of the big enterprise.—San Diego Union.

HOW TO MAKE GOOD CONCRETE

From a Bulletin issued by the Portland Cement Association.

GRADING THE AGGREGATE

Portland cement, which forms only 15 to 25 per cent of the volume of concrete, is carefully tested to see that it meets exacting specifications. Aggregates. which form 75 to 85 per cent of the volume of concrete, should also be tested. Aggregates should be clean, free from coatings or organic impurities and structbrally sound. Furthermore, proper size and grading of aggregates, or proper proportioning of fine and coarse aggregates, may double the strength of concrete. Doubling the strength as the results of a few hours' study and a little closer supervision is surely worth while.

GRADING OF AGGREGATES VARIES

Any number of fine and coarse aggregates of widely different size and gradings may meet the usual specifications in those respects. If combined in arbitrary proportions, such as 1:2:4, some of them will make far better concrete than others. For best results a proportion should be determined for each case that will fit the particular aggregates to be used. A little study will quickly show which of two or more available aggregates is the better graded and will therefore make the best concrete. Consideration of these factors may permit the use of local materials, with a saving in freight. It may also result in securing high grade concrete at lower cost. Such studies can readily be made by any competent engineer or inspector, and at very small expense.

Assuming a given consistency, which should always be as stiff as the nature of the work permits, and a given mix (proportion of cement to total volume of mixed aggregate), the strength of the

resulting concrete depends on the size and grading of the aggregate. In general, the larger and coarser the aggregate, the stronger will be the concrete. Coarse sand will produce stronger concrete than fine sand, while stone or pebbles in which the larger sizes predominate will produce stronger concrete than smaller stone or pebbles.

FINENESS MODULUS SHOWS GRADING

A simple index number, called the "fineness modulus," has been developed to indicate the size and grading of aggregates, and therefore their value for use in concrete. It can be applied to either fine or coarse aggregates, or to any combination of them. It shows at a glance which of two or more aggregates is the better graded. From it the proportions in which given fine and coarse aggregates should be combined are easily computed.

To determine the fineness modulus of an aggregate it is only necessary to make a simple sieve analysis. A set of U.S. standard square mesh sieves is used, each sieve having a clear opening double the width of the next smaller size. These sizes are 100, 50, 30, 16, 8 and 4 meshes per linear inch, and 3/8-inch, 3/4-inch and 11/2-inch. For larger aggregates 3-inch and 6-inch sieves may also be used. The percentage of the aggregate, either by weight or by volume, coarser than each sieve is measured. The sum of these percentages, divided by 100, is called the fineness modulus. A close approximation can be obtained by using only alternate sieve sizes, 50, 16, 4 and 3/4, and estimating the percentages for the others.

Sieve Analysis. Per Cent Coarser Than Each Sieve Ref. of a 1:4 Mix. lb. 100 3() per sq. in. 44 3.15 Peb bles 68 4 00 QQ. 5.00 100 46 100 86 3540 100 SICI 6.00 3390 91 100 6 25

90

TABLE 1. SIEVE ANALYSIS AND FINENESS MODULUS OF AGGREGATE

These four sieves make a convenient set for field use.

100

100

Table 1, gives the sieve analyses and fineness moduli of ten aggregates. first is sand, the second, pebbles. other eight aggregates were formed by combining these materials in various proportions. As the percentage of pebbles increases, the aggregate becomes coarser and the fineness modulus grows larger. thus reflecting the size and grading of the aggregate.

GOOD GRADING DOUBLES THE STRENGTH

The last column shows the compressive strength of concrete made from those eight aggregates in the proportions of one volume of cement to four volumes of total aggregate. Note that up to a certain point, the concrete increases in strength as the aggregate gets coarser. Beyond that point the aggregate is too coarse for the amount of cement used and the concrete decreases in strength. Note also that proper grading of aggregate may double the strength of the concrete. For other mixes the same principle holds true. although the greatest strength would be obtained with a different grading. The richer the mix, the coarser the aggregate and the larger the fineness modulus that will give the strongest concrete.

Aggregate No. 3, with a fineness modulus of 4.00, corresponds to a bank

run gravel; it contains entirely too much fine material for best results. Aggregate No. 10, with a fineness modulus of 6.75, corresponds in grading to a crusher run stone; it contains too much coarse ma-This shows the folly of using either bank run gravel or crusher run stone. Such material should always be screened and recombined in proper pro-

2790

2540

FINENESS MODULUS IS SIMPLE

The fineness modulus of any mixture of two or more aggregates, such as fine and coarse, is merely the weighted average of the fineness moduli of the separate materials. For example, if 32 per cent of sand No. 1 (F. M. = 3.15) is mixed with 68 per cent of pebbles No. 2 (F. M. = 7.00), the fineness modulus of the mixture is:--

F. M. =
$$32 \times 3,15 + 68 \times 7.00 = 5.77$$

100

This agrees closely with the value given in the table (5.75) for aggregate No. 6, which was found by a sieve analysis.

Sieve analyses, which are easily made, will give the fineness moduli of any fine and coarse aggregates, while a simple calculation will show the fineness modulus of any mixture of them.

If the proper fineness modulus for the work in hand is known (see below), the proportions in which given fine and coarse aggregates must be combined to secure

TABLE 2. STRENGTH OF CONCRETE FROM AGGREGATES OF UNIFORM FINENESS MODULES

Mix 1:4 by volume. Relative consistency 1.10. Age at test 28 days. Specimens (6 by 12-inch extinders) were stored in damp sand and tested damp

Ref. No.		Sieve Analysis. Per Cent Coarser Than Each Sieve								Fineness Modulus	Comp. Strength
	100 50 30		16	16 8		3 8	3/4	11/2		lb. per sq. in.	
11	95	89	82	7.5	. 67	67	67	62	0	6.04	2780
12	98	95	90	8.3	8.3	83	50	22	0	6.04	2530
1.3	98	94	90	86	8.3	80	55	18	0	6.04	2590
14	96	90	80	80	80	80	60	38	0	6.04	2570
15	90	85	. 81	78	75	73	66	56	0	6.04	2580
16	100	93	82	73	73	73	63	47	0	6.04	2880
17	100	100	100	92	81	60.	45	26	0	6.04	2930
18	100	99	96	91	80	50	50	38	0	6.04	3040
19	99	98	90	. 85	80	76	38	38	0	6.04	3030
20	99	98	91	85	80	76	67	8	0	6.04	2690
erage ximum nimum	value										2760 3040 2530

that fineness modulus can readily be computed.

Sieve analyses of aggregates may vary over a wide range, but as long as the sum of the percentages coarser than each sieve (fineness modulus) is the same, the aggregates may be expected to give uniform results in concrete. This relation is shown in Table 2, which gives the sieve analyses, fineness moduli and concrete strengths of 10 aggregates made up by artificial grading of the same sand and Although the sieve analyses vary, the total, or fineness modulus, is the same in all cases. Note that all 10 aggregates made concrete of substantially the same strength, the mean variation from the average being only 6.2 per cent.

Thus the fineness modulus, which is an index of the size and grading, indicates the value of an aggregate for use in concrete. The reason is that, eliminating variations in the absorption of the aggregates, the fineness modulus reflects the quantity of mixing water necessary to obtain a given consistency. In general, consistency and mix being the same, the fineness modulus indicates the strength that can be expected in the concrete. Other conditions being the same, aggre-

gates having the same fineness modulus will produce concrete of substantially the same strength.

PROPORTIONS DEPEND ON AGGREGATES

Applying this principle to actual construction, it means that if several fine and coarse aggregates are available, concrete of substantially the same strength can be made from any combination of fine and coarse material, provided that the materials are proportioned to have the same fineness modulus. For one set of materials the proper proportions may be 1:2.3:2.7, for another 1:1.6:3.4 and so on. To apply an arbitrary mixture, such as 1:2:3 to all aggregates, regardless of their grading, will not give uniform or satisfactory results. The mixture should be determined after a study of the particular aggregates to be used. the grading of the aggregate changes during the progress of the work it is an easy matter to change the mixture accordingly.

As stated before, larger fineness moduli can be used with rich mixes than with with lean ones. Therefore, the best value of fineness modulus will depend on both the mix and the maximum size of the

TABLE 3. BEST VALUES FOR FINENESS MODULUS.

Mix	Size of Aggregates											
Cement Aggregate	0-4	0-3 s Inch	0⊢3 ₄ Inch	0−1 Inch*	0-15 Inch	0-2 Inch*	0—3 Inch					
1:7 1:6 1:5 1:4 1:3 1:2	3 20 3 30 3 45 3 60 3 90 4 20 4 75	3.95 4.05 4.20 4.40 4.70 5.05 5.60	4.75 4.85 5.00 5.20 5.50 5.90 6.50	5 15 5 25 5 40 5 60 5 90 6 30 6 90	5 55 5 65 5 80 6 00 6 30 6 70 7 35	5 95 6 05 6 20 6 40 6 70 7 10 7 75	6 40 6 50 6 60 6 85 7.15 7 55 8 20					

^{*}Considered as "half size" sieves; not used in computing fineness modulus.

aggregate. Table 3, indicates the best value of the fineness modulus for the usual mixes and sizes of aggregates. The closer the aggregate comes to meeting these values the stronger will be the concrete.

These values for fineness modulus are based on sand and pebble aggregate for ordinary reinforced concrete. If crushed stone, slag or flat pebbles are used as coarse aggregate, or stone screenings as fine aggregate, reduce the values by 0.25. For mass work the values can be increased by 0.10 for ¾-inch aggregates, 0.20 for 1½-inch aggregate, and 0.30 for 3-inch aggregate. Fine aggregate used in concrete should not have a higher fineness modulus than that given for mortars of the same mix.

SHRINKAGE OF AGGREGATES AFTER MIXING

Table 3 gives the true mix, viz. the proportion between the volume of coment (expressed as unity) and the volume of total aggregate after the fine and coarse have been combined. In the nominal mix, which is the one ordinarily used, the volumes of fine and coarse aggregates are given separately, i. e., 1:2:4 or 1:1½/3. The nominal mix can readily be converted into the true mix. Vice versa, if

the ratio between fine and coarse aggregate is known, the true mix can be quickly converted into the nominal mix. For the usual ratios of fine and coarse aggregate (fine aggregate being 20 to 70 per cent of the total) the volume of total aggregate after mixing will be about 7/8 of the sum of the volumes of fine and coarse aggregate measured separately. For example, aggregate No. 6 in Table 1 contained 32 per cent sand. Four cubic feet of the total aggregate would require 4.57 cubic feet (4.00 x 8/7) of fine and coarse aggregate measured separately. Of that 4.57 cubic feet, 32 per cent, or 1.46 cubic feet would be sand and 68 per cent or 3.11 cubic feet would be pebbles. A 1:4 true mix would be obtained by using a 1:1.46:3.11 nominal mix. Because of this shrinkage when fine and coarse aggregate are combined a 1:2:4 nominal mix does not correspond to a 1:6 true mix as sometimes assumed, but to about 1:5.2 true mix.

More accurate values for the shrinkage of mixed materials can be obtained by measuring the volume of mixed aggregate obtained by mixing fine and coarse aggregates in the proper proportions, or by calculation from the weights of unit volumes of fine, coarse and mixed aggregates. For most cases, however, the average shrinkage of \(\frac{1}{2} \text{8} \) is sufficiently reliable.

EXAMPLE 1

Four fine aggregates and three coarse aggregates are available for a certain job. Which should be used? Their sieve analyses give the following data:

Aggregate	Per Cent Coarser than Each Sieve									Fineness Modulus	Range in Size
	100	50	30	16	8	4	3 8	3/4	11/2	1140Guius	III JAK
Sand No. 1		90	70	55	35	20	0	0	0	3.70	03/8 in.
Sand No. 2		85	65	40	20	0	0	0	0	3.10	0-4
Sand No. 3	95	75	60	30	0	0	0	0	0	2.60	0-8
Screenings No. 4	85	80	75	35	25	0	0	0	0	3.00	0-4
Stone No. 5	100	100	100	100	100	100	100	40	0	7.40	38-11/2
Pebbles No. 6	100	100	100	100	100	100	70	30	0	7.00	+-11/2
Pebbles No. 7	100	100	100	100	100	100	45	15	0	6.60	4-1

Because of better size and grading (larger fineness moduli) sand No. 1 and stone No. 5 are the best materials. Sand No. 2 and pebbles No. 6 are good materials, but sand No. 3 is quite fine and pebbles No. 7 are rather small. Screenings No. 4 are well graded, but an equally well graded sand would be preferable, because rounded particles find their way into place with less mixing water. That is the reason why a higher fineness modulus is permissible when sand is used than when screenings are used (See text preceding Table 3). Therefore the other materials would be better. Any of these materials will make good concrete, however, provided the fine and coarse materials are proportioned to secure a combined fineness modulus suitable to the mix and maximum size of the aggregate.

Example 2

A 1:4 true mix and a 1½-inch maximum size of aggregate have been adopted. Sand No. 2 and pebbles No. 6 have been selected because their cost is less than that of the other materials. In what proportions should they be combined to get the best results? Or, in other words, what nominal mix should be used?

The proper value of the fineness modulus for these conditions is 6.00 (see Table 3). Then sand No. 2 and pebbles No. 6 must be combined in such proportions as to secure a fineness modulus of 6.00 for the total aggregate. Let P

equal the percentage of sand and 100-P the percentage of pebbles.

$$P \times 3.10 + (1.00 \cdot P) \times 7.00 = 6.00$$

 $3.10P + 7.00 \cdot 7.00P = 6.00$
 $3.9P = 1.00$
 $P = 0.26$ or 26 per cent

Thus of the total volume of aggregate, 26 per cent should be sand and 74 per cent pebbles. The true mix being 1:4 the sum of the volumes of sand and pebbles for a one bag batch measured separately will be 4.57 cubic feet (4 x 8/7). Of this, 26 per cent or 1.19 cubic feet will be sand and 74 per cent or 3.38 cubic feet will be pebbles. The nominal mix will then be 1:1.2:3.4

EXAMPLE 3

During the progress of the work it becomes necessary to substitute screenings No. 4 and stone No. 5. What change should be made in the nominal mix?

When screenings are used as fine aggregates or when crushed stone is used as coarse, the values for the total fineness modulus given in Table 3 should be reduced by 0.25. In this case screenings and trushed stone are both being used and the value of 6.00 for the fineness modulus used in Example 2 should therefore be reduced by 0.50, or to 5.50. Using the same notation as before:

$$P \times 3.00 + (1.00-P) \times 7.40 = 5.50$$

 $3.0P + 7.4 - 7.4P = 5.50$
 $4.4P = 1.9$
 $P = 0.43 = 43$ per cent

Dividing the total volume of aggregate before mixing (4.57 cubic feet), 43 per cent fine and 57 per cent coarse, the new proportions are found to be 1:2.0:2.6.

SUMMARY

The size and grading of the aggregate are important factors in the strength of concrete, because they affect the quantity of mixing water necessary to attain a given consistency. The fineness modulus is an index number that shows the size and grading. Therefore it reflects the quantity of mixing water that will be

necessary and indicates the strength to be expected in the concrete under given conditions. It can be quickly calculated from a simple sieve analysis. The fineness modulus of any combination of fine and coarse aggregates is the weighted average of their separate fineness moduli. Study of the fineness modulus will show the proportions in which given fine and coarse aggregates should be combined for best results. Proper proportioning of fine and coarse aggregates may double the strength of concrete.

RICH MIXTURES MAKE STRONG CONCRETE

Aggregate is inert. Concrete hardens because of reactions between portland cement and water. The quantity of mixing water and the quantity of cement both affect the strength. In fact, the controlling factor in the strength of concrete is the ratio between the volume of mixing water and the volume of cement. As long as concrete is workable, the lower the water - cement ratio $(\frac{W}{C})$, the stronger will be the concrete. This ratio can be reduced in three ways, viz.:

- 1. By reducing the quantity of mixing water.
- By improving the grading of the aggregate.
- 3. By using more cement, i. e., a richer mix.

Obviously, then, the quantity of mixing water should always be as small as will give the consistency required for the work in hand. "Less mixing water means stronger concrete" holds true over the range of consistency that can be used in construction work. When the mixture is too dry to be workable, further reductions in the water content decrease the strength. To increase the strength still more, or in other words to reduce the water-cement ratio further and still have

a workable mixture, it is necessary to use more cement.

Improved grading of aggregates reduces the quantity of mixing water required to obtain a given consistency. Larger, better graded particles find their way into place more easily and require less mixing water. In general, coarse sand and large pebbles require less mixing water than fine sand and small pebbles. As long as the aggregate is not too coarse for the mix (proportion of cement to total aggregate), the coarser the aggregate the smaller will be the quantity of mixing water necessary for a given consistency, Therefore, the smaller will be the watercement ratio and the stronger the concrete.

Assuming a given consistency, which should always be as stiff as the nature of the work permits, and well graded aggregate, the strength of the resulting concrete depends on the amount of cement, i. e., on the mix. An increase in the amount of cement reduces the water-cement ratio, because a rich mix will attain a given consistency with less mixing water per sack of cement than a lean mix. If less mixing water per sack of cement is not used with a richer mix,

the value of the additional cement will be lost.

INCREASED STRENGTH FROM RICHER

Tests clearly bring out the increase in strength resulting from the use of richer mixes. Typical results are given in the table. The same aggregate, with a fineness modulus of 5.75 and graded up to 11/2 inches in size, was used in all tests. The cement was a mixture of equal parts of four brands purchased on the Chicago market. The relative consistency of all specimens was the same, 1.10, with a slump of 3 to 4 inches. This consistency is suitable for most construction work. All tests were made at the age of 28 days. Thus the increase in strength was due solely to increases in the quantity of cement.

EFFECT OF QUANTITY OF CEMENT ON THE STRENGTH OF CONCRETE

True Mix1	Approximate Nominal Mix ¹	Sacks of Cement per Cubic Yard of Concrete	Compressive Strength, Ibs. per Sq. In.
Neat		29.72	6630
1:1/3		23.0	5720
1:1	1: 38: 34	15.7	5070
1:2	1: 34:11/2	10.5	4070
1:3	1:156:2	7.9	3570
1:4	1:11/2:3	6.3	2760
1:5	1:2 :31/2	5.2	2090
1:7	1:3 :5	3.9	1400
1:9	1:31/2:7	3.1	1030
1:15	1:6:12	1.8	440

(1) The true mix is the ratio between the volume of cement, expressed as unity, and the volume of total aggregate after the fine and coarse have been combined. In the nominal mix, which is the one ordinarily used, the volumes of fine and coarse aggregate are expressed separately. The nominal mix can readily be converted into the true mix because for the usual proportions of fine and coarse aggregate (fine aggregate 20 to 100 per cent of the total) the volume of combined aggregate after total) the volume of combined aggregate measured separately. Because of this shrinkage at 1:3:15 nominal mix does not give a 1:8 true mix as sometimes assumed, but about a 1:7 true mix.

(2) The volume of concrete obtained from neat cement depends on the quantity of mixing water used. For water-cement ratios between 0.3 and 0.6, the volume of concrete obtained from one sack (one cubic foot) of dry cement equals 0.5 of a cubic foot plus the amount of water used. In the example given here the water-cement ratio was 0.4 and the shrinkage was therefore about 10 per cent.

Ordinary concrete mixes (1:3½:7 to 1:1½:2) contain from 3 to 8 sacks of cement per cubic yard of concrete. Note that within this range the strength of concrete increases in direct proportion to the quantity of cement. Each additional sack of cement per cubic yard adds about 500 pounds per square inch to the strength of concrete.

Increasing the cement content from 2 to 4 sacks per cubic yard adds 200 per cent to the strength of concrete. Increasing from 3 to 6 sacks per cubic yard adds 150 per cent to the strength, and increasing from 4 to 8 sacks per cubic yard adds 133 per cent. In other words, doubling the amount of cement considerably more than doubles the strength of concrete.

With mixes richer than 1:1½:2 the increase in strength is not so rapid but it is still directly proportional to the quantity of cement. Above 8 sacks of cement per cubic yard of concrete, all the way to neat cement, each additional sack of cement adds about 140 pounds per square inch to the strength of concrete.

GREATER IMPERMEABILITY

One more point: The richer the mixture, the more impermeable the concrete. A porous concrete may be injured by frost, may allow objectionable leakage, or may permit moisture to reach reinforcing steel and cause corrosion, with consequent spalling and damage. An impermeable concrete, carefully placed, will be free from such troubles.

EXTRA COST SLIGHT

Increasing the amount of cement does not change the cost of forms, nor the labor of mixing and placing the concrete, nor the overhead costs. It slightly reduces the necessary quantities of aggregates. The only extra cost is the additional cement. Compared to the total cost, this is very small. Even if the quantity of cement is doubled, the increase in cost is only 5 to 15 per cent of the total cost of the concrete. More than double the strength and resistance to

wear and greater durability at an increased cost of only 5 to 15 per cent is surely an excellent investment.

Remember that, with the usual mixtures, each additional sack of cement per cubic yard of concrete adds 500 pounds per square inch to the strength of the concrete.

AVOID EXCESS WATER IN MIXING

Excess mixing water weakens concrete. Sloppy mixtures sacrifice strength. One pint more water than necessary in a one-bag batch decreases the strength and resistance to wear of concrete as much as if two or three pounds of cement were left out. Concrete hardens because of chemical reactions between portland cement and water. The quantity of mixing water is just as important as the quantity of cement.

The strength of concrete depends on the ratio between the volume of mixing water and the volume of cement $(-\frac{W}{W})$. As long as the mixture is workable, the smaller the water-cement ratio, the stronger the concrete. Thus decreasing the quantity of mixing water and increasing the quantity of cement both add to the strength of concrete. With given proportions, the quantity of mixing water should obviously be reduced as far as possible and still obtain a plastic mixture.

Ingeneral construction work, maximum strength can seldom be secured, because the mixture would be too stiff to be workable, but 70 to 90 per cent of the maximum strength can readily be obtained. This would be a great increase over the usual results, since much of the concrete placed today contains 50 to 100 per cent more water than necessary and thus attains only half or even only a quarter of its possible strength.

In the manufacture of concrete products such as block and brick, the reverse is often true: Where the molds are removed at once the mixture must be extremely stiff and may contain too little water for maximum strength. In such cases stronger concrete would be secured with a more plastic mixture, which would require the molds to be left in place longer. In general construction, working conditions require a plastic mixture. Therefore, a safe rule for construction work is to use the smallest quantity of mixing water that will give a sufficiently plastic mixture for the work in hand. Resistance to wear, which is vital in concrete pavements, floors and sidewalks. increases with compressive strength. Thus, the smaller the quantity of mixing water the more wear-resistant will be the concrete.

Because of variations in the moisture content, absorption and grading of the aggregate, the exact amount of water that will be required for a given mixture and a given consistency cannot usually be specified in advance. The aggregate may contain enough water to reduce considerably the amount of mixing water necessary; fine sand or small pebbles require more mixing water than coarse sand or large pebbles. However, approximate quantities, applicable to usual conditions, are given in the following table:

APPROXIMATE QUANTITY OF MIXING WATER REQUIRED FOR CONCRETE

ı	M	ix		ximate M	Water Required (Gallons per sack of Coment)			
		Volume of Ag-		Aggr	egate	Mini-	Maxi-	
Ce	ment	After Mixing	Cement	Fine	Coarse	mum	mum	
	1 1 1 1 1	3 4 4½ 5 6½ 7¾	1 1 1 1 1 1	11/4 11/2 2 2 21/2 3	2½ 3 3 4 5 6	5 5½ 5¾ 6 7¼ 8¼	5½ 6 6¼ 6½ 73¼ 834	

Mixing water has two functions in concrete: first, to hydrate the cement; and, second, to produce a workable consistency. Rich mixtures require less mixing water per sack of cement than lean ones because the smaller volume of aggregate requires less mixing water to attain a given consistency.

Mixtures for reinforced concrete must usually be more plastic than for mass concrete or for pavements. Therefore, more mixing water is needed and the required strength can be obtained only by using more cement. Obviously, it is economy to limit the quantity of mixing water to the smallest possible amount.

The consistency to be used depends on the nature of the work. For mass work, sidewalks and pavements, the concrete can be fairly stiff. For reinforced concrete floors the consistency must be a little more plastic so that the concrete can be worked into place around the steel without difficulty. For thin reinforced concrete walls the mixture must be even more plastic. For all work, however, the consistency should be as stiff as possible. extremely wet mixtures should never be used.

Remember that each excess pail of mixing water may decrease the strength of concrete as much as if two pails of cement had been left out. Keep the quantity of mixing water as small as practicable for the class of work under way. Use the same consistency in all hatches.

THOROUGH MIXING INCREASES STRENGTH

Two batches a minute from a concrete mixer gives a rapid output, but sacrifices considerable strength in the concrete. Two batches a minute usually means a net time of mixing, after all the materials are in the drum, of only fifteen seconds. That is not enough for thorough mixing and will develop only part of the potential strength of the mixture. Moreover, concrete that has not been thoroughly mixed will not be uniform in quality: it is likely to contain stone pockets or voids which are weak spots and which may permit objectionable leakage.

Tests show that the time of mixing materially affects the strength of concrete.

These tests also show that thorough mixing makes much more uniform con-

crete. Specimens made of concrete mixed for only 15 seconds showed a mean varietion of 30 per cent in strength, while specimens made of concrete mixed for two minutes varied less than 10 per cent. Furthermore, thorough mixing gives increased plasticity. This means a more workable mixture and less labor required in placing.

Changes in the speed of the mixer between 12 and 25 revolutions per minute (R. P. M.) have little effect on the strength of concrete. It is time of mixing, not speed of mixing, that insures strength and quality. Resistance to wear, so important in floors and pavements, increases with compressive strength. The increased strength and resistance to wear

obtained by thorough mixing are decidedly worth while. If increased output is needed, don't speed up the mixeruse a larger one or get a second mixer.

Mixing the concrete for five minutes will give a still further increase in strength. Five minutes is, of course, longer than would be feasible on most construction work, but mixing for one to two minutes after all materials, including water, are in the mixer drum is feasible and should be required.

When a mixer is speeded up, rapid output is temporarily secured. However, this spurt is usually followed by a period when the mixer is idle, because of delays in delivery of materials, completion of forms, or other causes. In most cases just as much concrete would be placed per day or per week with a longer time of mixing, and the concrete would be of much better quality.

The bridge engineer of one large railway system requires his bridge gangs to mix all concrete at least two minutes. At first some of the foremen objected to this rule as unnecessary and inefficient, but at the end of a year the foremen all agreed that not only had they placed better concrete than ever before, but the concrete had been easier to handle and the total time required on each job had been reduced.

The Progress Report of the Joint Committee on Standard Specifications for Concrete and Reinforced Concrete, issued in June, 1921, states: "The mixing of each batch shall continue not less than 1½ minutes after all the materials are in the mixer." The general adoption of this rule would do much to improve the quality and strength of concrete.

PROPER CURING INCREASES STRENGTH

Careful distinction should be made between the requirements of concrete for water during the mixing operation and in curing. A safe rule to follow is to use the smallest quantity of mixing water that will produce a sufficiently plastic mixture for the work in hand, and then to give the surface of the concrete as much curing water as possible after the concrete is placed.

Concrete hardens because of chemical reactions between portland cement and water. Down to an amount less than can be used in construction work, the smaller the quantity of mixing water the stronger will be the concrete. Therefore, the quantity of mixing water should be reduced as far as possible. However, once the concrete is placed, and it has hardened, conditions change and ample curing water should be provided.

The chemical reactions of the hardening of concrete are slow, and if sufficient

moisture is not present they cannot be completed. The mixing water essential to proper hardening of freshly placed concrete is often lost by absorption or evaporation even after the concrete has begun to harden. Under such conditions, concrete attains only part of its potential strength. Therefore, the water content of freshly placed concrete damp during its early hardening period, or, in other words, providing plenty of curing water, prevents evaporation of necessary moisture, and permits concrete to harden under favorable conditions.

PROTECT CONCRETE WHILE HARDENING

Tests show that protection during the early hardening period greatly increases the strength and resistance to wear of concrete. All specimens were tested at the same age—four months. One set was allowed to harden in air for the full

four months; the second set was stored in damp sand for three days and in affor the remaining 117 days; the third set was stored in damp sand 21 days and in air the remaining 99 days; while the fourth set was stored in damp sand the full 120 days and was tested while still damp. Thus the increased strength and resistance to wear was caused solely by the better curing conditions provided.

Keeping concrete damp for the first ten days increased its compressive strength 75 per cent, for three weeks 115 per cent, and for four months 145 per cent.

Keeping concrete damp for the first ten days decreased the amount of wear 40 per cent, and for three weeks 55 per cent. Keeping concrete damp for four months did not cause a further decrease in wear, but the specimens were tested damp. Had they been allowed to dry out for a few days before being tested, the amount of wear would probably have been less.

Reversing the form of these wear results, ten days protection increased the resistance to wear of concrete 65 per cent, and three weeks protection 120 per cent. Thus proper curing increases the resistance to wear of concrete almost

in the same proportion as the compressive strength. Needless to say, resistance to wear is an important consideration in floors, pavements and platforms.

METHODS OF PROTECTING

Freshly placed concrete can be kept damp in several ways. Drenching the subbase and forms with water before concrete is placed will reduce absorption. Horizontal surfaces, such as floors and pavements, can be covered with damp sand the day after they are laid, when they have hardened sufficiently to prevent pitting the surface, and kept damp by frequent sprinkling. Sometimes small dikes of clay are built around a section of floor or pavement, which is then flooded with water. Vertical surfaces can be kept damp by frequent sprinkling of the forms or exposed concrete. Sometimes walls are covered with canvas or burlap, which is drenched with water several times a day.

Keeping concrete damp the first ten days will give the owner over 65 per cent better value for his money. Three weeks' protection will give still greater increase in value. There is nothing that can be done to concrete that will pay such big dividends in better concrete as proper use of water in mixing and in curing.

The twenty-fifth Annual Convention of the League of California Municipalities will be held at Coronado, September 10th-14th, 1923.

Start making your arrangements to attend NOW

WHAT THE CITIES ARE DOING

Salinas. City Trustees have awarded contract to the Clark Henery Construction Company for the pavement of several streets with a black base coated Warrenite surface. The low bids submitted for 4 inch paving including the grading was .209 per square foot and for 4½ inch paving .234 per square foot including the grading.

Arroyo Grande. A special election has been called to submit to the electors the question of voting 22,000 bonds for the construction of a concrete bridge across the Arroyo Grande beach on Mason St.

Los Angeles will elect a board of freeholders in June to draft a new charter.

Beverley Hills. At a special election held on July 6th, 1923, this city voted overwhelmingly bond issues for improvements aggregating \$640,000 as follows:

nents aggregating \$640,000 as follows \$400,000—for Water Works System.

\$50,000—for a city hall site.

\$25,000—for a garbage incinerator. \$25,000—for road machinery.

\$140,000—for sewers.

This is indeed a progressive program of municipal improvements for a city of some 750 population.

Calistoga. 475,000 square feet of 5inch Portland cement concrete pavement projected in this city. (Protests to be heard on the 12th.)

San Mateo. Bids on 332,000 square feet of concrete base with asphaltic top rejected and plans and specifications are being prepared for one course 5-inch Portland cement concrete pavement.

St. Helena. Plans and specifications have been adopted for resurfacing the western end of Main Street with 6-inch Portland cement pavement.

Auburn. Voted 80,000 General Obligation Bonds for paving all approaches to state highway. Approximately one million square feet of Portland cement concrete pavement is projected for this year.

Porterville. City Engineer instructed to prepare plans and specifications for paving 35 blocks, 5-inch Portland cement concrete pavement with 7-inch edge.

Napa recently voted bonds to the amount of \$600,000 for the acquisition of the municipal water system. The bonds were carried by a vote of 1,483 yes and 67 noes.

During the past few years the city has been making extensive street improvements with both concrete and asphalt macadam pavements, approximating an expense of \$50,000 annually. The city has recently undertaken the re-numbering of buildings on its streets. Improvements have also been made to the city hall in the way of enlarging the office of City Clerk who is ex-officio tax collector and treasurer. Steel filing devices have been installed, also a Kardex System for filing water bills, which system by the way, we find very convenient.

Very truly yours, H. H. THOMPSON. City Clerk.

Whittier has just purchased new quarters for the city offices on a site on which the officials expect to build a city hall. The location is just opposite the city library and is regarded as the beginning of a civic center. The city will soon vote on the question of issuing bonds for the purchase of three park sites, one of which it is proposed to use for play-ground and picnic purposes. An election is expected to be called in the near future for the annexation of considerable territory west, south and east of the present corporate limits, a large portion of which is already subdivided and built upon.

During the past year many thousand square feet of cement concrete paving was laid throughout the city. Property is now being assessed at full market value instead of fifty percent thereof as formerly; however, the tax rate was reduced more than half as the result thereof. The Board of Trustees is now considering the passage of a zoning ordinance, a map for which was recently prepared by the City Planning Commission. A Set Back Ordinance is also included, likewise a new Building Ordinance.

CLAUNCY O. TRUEBLOOD, City Clerk.

Kingsburg. Realizing the need of a city park and picnic ground, a movement is on foot in this community to purchase thirty acres of land on the banks of the Kings River, one mile south of the city limits on the state highway. The property is beautifully shaded with large oak trees some of which have a spread of almost two hundred feet. Leading citizens of the community feel that the city can ill afford to pass up this opportunity of securing this property and a strong effort is being made to exercise the option which the chamber of commerce now holds.

In the way of public improvements, Kingsburg is now having pavement laid on 19th and 20th Avenues, Riverside Street and a portion of California Street. The paving when completed will make East Park Addition to Kingsburg a very well paved and desirable residence district while California Street will facilitate heavy hauling to the industrial section of the city.

Kingsburg, California,

June 10, 1923.

Montebello has voted a \$300,000 High School Building, and ground has just been broken for the same. At a special election held June 12, 1923, the question "Shal. Montebello Have Pool Halls," was defeated by nearly two to one. At a special election held July 10, 1923, Montebello voted to purchase a 10-acre park site for a central park.

The city has purchased a new Fageol twenty-nine passenger motor bus, to be delivered in August for the Municipal Bus Line, this making four buses in operation on Municipal Service. This bus service is new, having been started January 1, 1923, with three buses, has already called for an additional bus to take care of the fast increase in population.

Very truly yours, L. G. HERR,

City Clerk, City of Montebello.

Azusa has just completed eleven miles of paved roadways and the Chamber of Commerce is backing an effort to vote for an additional \$40,000 bond issue to complete all the streets in the city.

The city has recently purchased a 750 gallon pumper, Seagrave fire engine at a cost of \$15,000 and have remodeled a two story brick building near the Santa Fe depot for its accommodation.

Yours very truly,

J. O. DURRELL, City Clerk.

Claremont has bought a new fire truck from the American-LaFrance Fire Engine Company, a Type 89,400 gallon pumper. This with the Ford chemical should furnish adequate protection. Our water pressure is very good.

The city is taking steps to call a bond election in the fall for a sewer outfall and the paving of a number of streets.

Yours very truly,

J D. JOHNSON,

City Clerk.

Pittsburg has just awarded contracts for paving thirteen blocks of down-town streets with five inches of concrete and eighteen blocks of residential streets with oil macadam. These streets are to be adorned with electroliers.

A new residential subdivision is being developed to meet the housing requirements made necessary through the expansion of the Columbia Steel Corporation and the increasing growth of the other industries located here.

The city has acquired a site on the water front for building a municipal fishermen's wharf and ferry landing.

We have recently completed and now occupy one of the finest city halls in California.

At the last meeting of the city council the purchase of a new Seagrave triple combination fire engine, was authorized. This is the second Seagrave that the city has purchased within the last three years and with this new equipment, we have one of the most efficient volunteer fire departments anywhere. Our fire loss last year amounted to less than \$200.

K. M. DORTON.

City Manager.

Sacramento and outlying territory has just voted to create a municipal utility tlistrict under the 1921 Act. The vote was 6314 yes to 978 no.

H. G. DENTON, City Clerk.

San Diego recently sold bonds aggregating \$920,500, which had been voted in March and April, the proceeds of which are to be expended as follows:

\$100,000 on paving projects.

\$495,500 on completion of municipal pier No. 2.

\$325,000 on extension of water mains and construction of a milliongallon capacity stand-pipe.

Another issue of \$400,000 has been voted for the construction of a second main conduit connecting the city's distributing system with the Lower Otay Reservoir, on the impounding system.

These bonds will be sold as soon as the final detailed plans have been completed.

The city has established a special tax rate of 1 cent on each hundred dollars' valuation for the planting and maintenance of street trees. This tax will yield approximately \$10,000 a year on the present assessed valuation.

By recent charter amendments the water commission has been abolished, and the work of that department has passed under the control of the manager of operation.

The main buildings of the Panama-California Exposition period of 1915-16 have been repaired and made practically permanent, and are being placed in use for museums, American Legion head-quarters, art centers, etc. To the rehabilitation fund the city contributed \$25,000, the county \$25,000, and over \$50,000 was raised by popular subscription.

Two Junior High Schools, each with a capacity of about 1000 pupils, were placed in commission during the past year.

ALLEN H. WRIGHT, City Clerk.

Sunnyvale. On July 16, 1923, bids will be received for the purchase of \$5000 worth of Sanitary and Sewer Extension Bonds, for the purpose of extending the Outfall Sewer.

Last week the lift pump at the Municipal Water Plant was lowered 16 feet 6 inches. Very truly yours,

IDA TRUBSCHENCK.

Susanville has called an election for June 26, 1923, to vote additional bonds to construct a new town hall at an estimated cost of \$34,000.

M. J. TILLEY, Town Engineer.

Six Years' Accomplishments in Alameda, Calif.

Under the

City Manager Form of Government

By CLIFTON E. HICKOK, City Manager

Written Expressly for Pacific Municipalities

On June 1, 1923, the City of Alameda completed a period of six years under the City Manager form of government. This period is of long enough duration to have given a thorough and conclusive test of the idea. It can safely be said that the citizens of Alameda are practically unanimous in believing that the City Manager idea has proven highly successful in this City during the six years that it has been in operation. Not only has there been achieved a long list of civic accomplishments and an era of constructive projects, but there has also been developed an atmosphere of harmony and cooperation between the various City officials and employees. There is a closer coordination and cooperation between all departments of the City. Improvement clubs and other citizen groups have evidenced a greater interest in civic affairs and have cooperated with the administration in achieving the consummation of various projects.

The material aspect of the City has improved as evidenced in better streets, expansion and development of park areas, better care of street trees and the cleaning up of vacant lots throughout the City. Zoning and set back ordinances have been adopted which protect the residential areas from the invasion of undesirable structures. A spirit of cooperation with the adjacent cities has been developed which has resulted already in the formation of a public utility district embracing nine nearby municipalities, the purpose of the district being to develop an adequate supply of water. The City of Alameda initiated the movement for the removal of two estuary bridges and the substitution of a modern tube therefor and the whole county showed a spirit of cooperation in voting the necessary bonds to the extent of \$4,500,000. Various other results have been achieved during the six year period, a brief report of which may be of interest.

BUDGET SYSTEM

A modern method of municipal accounting has been established, incorporating the budget into the books of the Auditor. The system of account numbers is so complete that it shows in detail the annual expenditures for each subdivision of the various departments. The revenues as well as the expenditures of the City are so accounted for, that at any time during the year the exact condition of the City finances can be determined with a minimum of effort. penditures of the City are budgeted in great detail and adherence to the budget required from all departments. A graphic chart of progressive expenditures in each department is maintained by the City Manager which results in constant familiarity with and control of the expenditures.

TIDELAND RENTALS

The State of California in 1913 granted to the City of Alameda all submerged lands within the boundaries of the City and situated below the line of mean high tide. A considerable area of these submerged lands had been used for many years by different private concerns without payment of rental but it was not

until the advent of the City Manager form of government in 1917 that steps were taken by the City to collect rental for the use of this City property. As a consequence of an investigation and report by the first City Manager, Chas. E. Hewes, the City Council entered into leases with the various users of the City's submerged lands, as a result of which the City is now receiving an annual rental of \$7,750.

INDUSTRIAL RAILROAD

For a great many years successive City Councils of Alameda had discussed the construction of a freight line railroad along the northern waterfront of Alameda to serve the industrial area of the City. In 1918 under the impetus of war development the City constructed the first unit of the industrial railroad along Clement Avenue from Broadway to Grand Street, a distance of a mile and a quarter, at a cost of \$27,000. This railroad proved of great value to the various industries along the estuary and was a very material assistance in expediting work on government projects. The ownership of this industrial railroad by the City is of tremendous potential value as it forms the key to industrial development of Alameda's northern waterfront as well as that of the future U. S. Naval Base. The city intends to retain its ownership of this railroad and will jealously guard against any attempt tending towards its acquirement by privately owned corporations.

FIRE DEPARTMENT

The Fire Department of the City of Alameda during the last six years has been developed from an under-manned call system with inadequate equipment to a first-class two platoon department thoroughly equipped with up to date triple combination fire engines and auxiliary apparatus. The department has expanded from a personnel of 24 full time

men in 1917 to 47 men at the present time. The installation of the two platoon fire system is in keeping with the modern humanitarian trend of society, which believes that no man should be expected to be on duty continuously.

POLICE DEPARTMENT

Until the advent of the City Manager form of government in 1917, the Police Department was operated on the basis of two shifts of twelve hours each. This was at once changed to the basis of three shifts of eight hours each with a resultant increase in efficiency. By a more scientific readjustment of patrolmen in sections according to the complaints emanating therefrom, this change to a three shift basis was made without increasing the number of officers on the force. There resulted not only better working conditions for the men but a more efficient patrolling of the City.

In April, 1920, a police woman was added to the force in order to better control the problems occasioned by Alameda's numerous beach resorts. This innovation has proven extremely valuable as a protection to the youth of both sexes and has met with the enthusiastic approval of the citizens, particularly the womens' clubs. In 1919 a motorcycle officer was appointed to prevent speeding and other traffic violations.

STREETS

The street pavements of Alameda are mostly oil macadam. In 1917, according to a condition survey of the pavement of every block in the City, only 23% of the street area was in good condition. Today 70% of the pavement throughout the City is in good condition and 25% additional is in a fairly good condition. The Street Department maintains a full equipment for scarifying and resurfacing the oil macadam pavements and all of this work is done by the City itself. Each season from 10 to 12 miles of streets are

resurfaced and placed in first-class condition. The streets are now in better condition than they have ever been. The resurfacing of the oil macadam streets is done at a cost of 2 cents per square foot.

A local ordinance was adopted in 1921 by which the City is able to compel property owners to construct concrete curbs in front of their property. As a result a uniform concrete curbing is gradually being obtained along all the streets. After a property owner constructs a concrete curb, the City puts in a flat cemented gutter, replacing the old cobble stone curved gutter. As a consequence not only is the appearance of the street improved, but the cleaning of the streets is facilitated and made cheaper.

Street sweepers in white uniforms have been placed on the business streets and main thoroughfares and as a consequence the streets present a neat appearance which has been favorably commented upon by visitors.

SEWERS

During 1921 the North Side Sewer, a reinforced concrete pipe with a maximum order to relieve a serious situation which had existed for many years in that portion of Alameda west of Grand Street. Practically one third of the city's population is served by this sewer. The bond issue for this project was \$175,000, but the work was actually completed at a cost of \$150,486, a saving of practically \$25,000.

PARKS AND RECREATION

During the last six years two parks have been acquired and developed by the City, namely Franklin Park and an addition to Washington Park. The City now has five well maintained and attractive parks for the pleasure and recreation of its citizens. At Washington Park there has recently been constructed a beautiful comfort station for women

which is a credit to the City. At this same park a baseball ground with large bleachers and exceptionally well built metal backstop has been developed.

The Park Department now has charge of all street trees and a crew of men is maintained during the fall of each year in uniformly trimming these trees throughout the City. New trees are being set out continuously wherever needed. The policy of the Park Department taking over the responsibility for the shade trees guarantees expert care of these most valuable assets.

WEED CLEANING

An ordinance has been made effective in Alameda, compelling owners of all vacant lots to remove therefrom debris, weeds and dry grass. This law is strictly enforced and any lot not cleaned up by July 1st of each year is cleaned by the Street Department and the cost becomes a lien against the property. As a consequence the attractive appearance of the City is greatly enhanced by the uniformly clean lots.

ANT ERADICATION

The City of Alameda, like other East Bay Cities seems particularly attractive to the Argentine Ant, which is a source of annoyance to the housewife. In cooperation with the Boy Scouts of Alameda, there is placed each season throughout the City, thousands of bottles of ant poison. The City now makes an annual appropriation for this problem and the actual placing of the bottles in the grounds of the residences is done by the Boy Scouts organization.

REFUSE DISPOSAL

A change has been made in the method of disposing of the City refuse. The garbage is now segregated at the home and collected separately by the scavangers, which results in a substantial revenue for the City and also keeps down nuisances from flies and rodents. The

garbage is sold to hog raisers at a rate of approximately \$3.50 per ton and results in a revenue of about \$2,000 per year.

SOCIAL SERVICE WORK

The handling of social service work and health center cases has been entirely changed and modernized in Alameda since the advent of the City Manager form of Government. This humanitarian work has come to be acknowledged as one of the most important civic functions of American cities, and the City of Alameda can well be proud of the splendid results being obtained here. workers in this field of endeavor have charge of this department in Alameda and this City has an enviable record throughout the state. There is now under construction at a cost of \$40,000 a splendid new building to be known as the Alameda Health Center, which will undoubtedly be one of the finest equipped and operated health centers in the country.

Pensions

The pension system of the Police and Fire Departments of the City of Alameda, like that of practically all other cities, was created many years ago and was not established upon a scientific acturial basis. As a consequence it was found that there was actually a deficit in this fund of \$186,695, and that unless something was done shortly to protect the interest of the City and the members of the Police and Fire Department, that a most serious collapse of the fund would occur. Consequently an actuary was employed to investigate and report upon the matter. As a result a new pension fund has been created to which the City is contributing annually from the budget, an amount adequate to place the fund upon a sound financial basis. In other words a most dangerous pension makeshift has been replaced with a scientific system.

ZONING AND SET BACK ORDINANCES

In conformity with the growing movement of zoning throughout the United States, the City of Alameda in February, 1919, adopted a zoning ordinance creating zones throughout the City and regulating the type of structures which could be built therein. The City of Alameda is largely residential, the homes being mostly of a single family type and the protection of these homes is of great importance. In March, 1922, a set back ordinance was adopted to protect home owners from having a new house or structure built beyond the prevailing front line of homes already built, a restriction which adds to the beauty of the

It was found after four years of experience with the original zoning ordinance that it was not exactly suited to the needs of a City the size of Alameda and as a consequence an abbreviated and modified zoning ordinance was adopted in January, 1923, which affords ample protection to the property owners of the City.

Webster Street Tube

The movement for the construction of a concrete tube to replace the two bridges now across the estuary in the vicinity of Webster Street, was originated by the City Administration of Alameda in 1919, and has been fostered continuously since that time. The benefits to both land and water traffic have been continuously kept before the people of the whole county. As a result an organization of individual representatives and property owners was finally formed to carry the idea to a successful culmination, which was achieved on May 8, 1923, when the people of the county voted bonds to the extent of \$4,500,000, to construct a modern vehicular tube beneath the estuary, thereby eliminating all obstruction to water traffic. This means a stimulus to the development of our inner harbor.

WATER DISTRICT

A great deal of the credit for initiating the movement for the solution of the water shortage of the East Bay District is due the City of Alameda. This question has been under intensive study for the last four years and Alameda has played no small part in lending impetus to the movement. There has resulted the formation of a public utility district embracing seven cities of the East Bay District, the express purpose of which is to develop an adequate supply of water for the whole area. This will be reflected in an industrial, residential and financial expansion of the whole territory.

Compensation Insurance

The City of Alameda now carries its own compensation insurance and by annual appropriations in the budget, is building up a reserve fund fully adequate to meet the requirements of the state law. There is now \$7500.00 in this reserve fund, which is bearing interest at the rate of $4\frac{1}{2}\%$ per annum. The city for five years carried this insurance with the State Compensation Insurance Fund during which time it paid out in net premiums, \$17,319.27, while the actual losses during that period were only \$2,777.00. During the last fiscal year the interest on the reserve fund more than paid for the losses. It is therefore evident that it is wisdom for the city of Alameda to carry its own compensation insurance.

CASH SURPLUS

At the end of this fiscal year or July 1, 1923, after six years of City Manager Form of Government, there was in the hands of the City Treasurer, a cash surplus of \$45,700.00. In view of the fact that so many cities have found a deficit on their books at this date, the citizens of Alameda can view with pride and satisfaction this very substantial surplus.



The Demonstration Proportional Representation Election at Chicago

The Illinois Branch of the Proportional Representation League conducted this year the largest unofficial election ever held in this country under the Hare system of proportional representation. Some eight thousand ballots for a hypothetical commission of five to represent the United States at an international conference were distributed among the political science classes of eight large middle western universities (i. e., the University of Wisconsin, the University of Minnesota, Iowa State University, the University of Illinois, Ohio State University of Illinois, Ohio S

versity, Washington University, Northwestern University, and the University of Chicago), the Illinois members of the League of Women Voters, the Association of Collegiate Alumnae, the Women's International League for Peace and Freedom, labor unions, settlements, two high schools, and other public bodies. Life and Labor, the organ of the Women's Trade Union League, and the Bulletin of the Illinois League of Women Voters also published similar ballots. The following ballot was used together with the standard directions to the voters.

DIRECTIONS TO VOTERS

Put the figure 1 opposite the name of your first choice. If you want to express also second, third, and other choices, do so by putting the figure 2 opposite the name of your second choice, the figure 3 opposite the name of your third choice, and so on. You may express thus as many choices as you please, without any regard to the number being elected. (Five delegates are to be elected in this case.)

Your ballot will be counted for your first choice if it can help him. If it cannot help him, it will be transferred to the first of your choices whom it can help.

You cannot hurt any of your favorites by marking lower choices for others. The more choices you express, the surer you are to have your ballot count for one of them. But do not feel obliged to express choices that you do not really have.

A ballot is spoiled if the figure I is put opposite more than one name. If you spoil this ballot, tear it across once, return it to the election officer in charge of the ballots, and get another from him.

FOR THE INTERNATIONAL CONFERENCE

Jane Addams .
General Tasker H. Bliss
William E. Borah
William J. Bryan
Eugene V. Debs
Samuel Gompers
Herbert Hoover
Charles E. Hughes
Henry C. Lodge
J. P. Morgan
Oscar W. Underwood
Woodrow Wilson

From all these sources, 2,175 ballots were returned, of which only eight, or less than one-quarter of one percent, were invalid. The count was held on Thurs-

day, May 4th, at the University of Chicago under the direction of Professor L. D. White, and the following page shows the result of the election.

RESULT MODEL P. R. ELECTION

 $Quota = \frac{Votes}{Seats+1}$ TOTAL BALLOTS CAST-2167

Disregard Fraction and Add 1

 $2167 \div (5+1) = 361$

361 + 1 = 362

						I	PAC	IF	C	MU	NIC	CIP.	AL	(TI	ES
Quota	Totals	Exhausted	Wilson	Underwood	Morgan	Lodge	Hughes	Hoover	Gompers	Debs	Bryan	Borah	Bliss	Addams	
362	2167		576	18	20	56	679	167	45	130	50	105	20	301	First Choice
			চ্চ	+=	+ 15	+ 65	-317	+113	+ 10	+ 1	+ 22	+ 28	+ 8	+ 31	First of Choice Hughes
			576	29	35	121	(F)	280	5.5	114	72	133	28	332	Results
			-214	+ 23	+ 13	+ 16		+ 61	+ 6	+	+ 30	+ 15	+ 9	+ 30	Distr. of Wilson Votes
			ম	52	48	137		341	61	155	102	148	37	Ħ	Results
		+		+ 3	+ 3	+		+ 15	+	+ 2	+ 2	+ 6	- 37		Distr. of Bliss Votes
				55	51	141		356	62	157	104	154			Results
		+ 5		+ 3	- 51	+ 13		+ 6	+ ∞	+	+ 10	+ 5			Distr. of Morgan Votes
				58	ক	154		(X)	70	158	114	159			Results
		+ ==		- 58		+ 21			+	+ 3	+ 10	+ 9			Dist. of Under- wood Votes
						175			74	161	124	168			Results Under- Results wood Votes
		+ 14			1	+ 22			- 74	+ 15	+ 7	+ 16			Distr. of Gompe Votes
						197				176	131	184			Results
		+ 48				+ 33				+ 18	-131	+ 32			Distr. of Bryan Votes
						230				194		216			Results
		+ 65				+ 24				-194		+105			Distr. of Debs Votes
						254						321E			Results

The steps involved in the count will now be explained in detail.

ASCERTAINMENT OF QUOTA

The number of ballots necessary to elect a candidate is the smallest number which can elect five but not six candidates. This is patently 1 more than the quotient secured by dividing 2,167 by 6 (i. e., one more than the number to be elected.) The quota was, therefore, 361 + 1 = 362. Five candidates could secure this number but not six.

Election of Hughes and Wilson

The tabulation of ballots according to their first choices showed that both Hughes and Wilson had received more than their quota and were therefore elected.

TRANSFER OF HUGHES'S SURPLUS

Hughes's 679 ballots were 317 more than were required to elect him. Had these ballots been non-transferable, they would have been wasted, but under proportional representation they are transferred to their next effective choice! A question now arises; which 317 ballots are thus transferred? There are two methods. The first is the so-called "exact" method, by which the second choices of all the 679 ballots would be tabulated and the 317 ballots distributed according to the proportion which each candidate had received of the next effective choices of the 679 ballots as a whole. The second method is the socalled "chance" method, whereby 317 ballots would be selected at random from the total number and these ballots then distributed according to the next effective choice marked upon them. It is, of course, patent that such a "sample" will reflect with great accuracy the choices of the whole. The chance method was the one used in this count because of its greater ease and its substantial accuracy.

Thus those extra ballots upon which Hughes had been marked as first choice and Hoover as second choice would be transferred to Hoover. Those upon which Wilson had been marked as second choice, since they would not be needed to elect Wilson, who had already attained his quota, were transferred to the third choice. As might be expected, Hoover benefitted most from the transfer of Hughes's surplus, receiving 113 of the 317 transferred votes. The next largest number, 65, went to Lodge, 31 went to Miss Addams and the remainder as indicated.

TRANSFER OF WILSON'S SURPLUS

The 214 votes that Wilson received that were not needed to elect him were then transferred according to the principles outlined above. Thirty went to Miss Addams, who thereupon secured her quota and was elected. The next effective choice on 61 of the ballots was Hoover, who thereby secured a total of 341. Thirty went to Bryan, 23 to Underwood, and varying numbers to the other candidates.

DISTRIBUTION OF BLISS'S BALLOTS

Three candidates were by now elected: Hughes, Wilson, and Jane Addams. Two remained to be elected. The process of elimination was now begun by striking off the lowest man on the list, Bliss, and transferring his ballots to their next effective choice. Fifteen of these went to Hoover, bringing his total to 356, six went to Borah, while the other candidates received scattered votes. One ballot could not be transferred to any one because all the other choices of the voter had already been elected. Had this voter chosen to indicate other choices, it would not have been exhausted but would instead have been transferred to the next choice.

DISTRIBUTION OF MORGAN'S BALLOTS

There were still two candidates to be elected, so Morgan, the candidate who now stood lowest, was eliminated and his votes transferred. Six went to Hoover, who thereupon attained his quota and became the fourth member of the Com-

mission. Lodge was the next effective choice on thirteen of the ballots and Bryan upon ten, while the others were distributed as shown in the table.

DISTRIBUTION OF UNDERWOOD'S BALLOTS

Since there was still another member of the Commission to be elected, Underwood, who was now the candidate lowest on the poll, was declared eliminated and his votes transferred to their next effective choice. It is interesting to note that the largest number, 21, went to Lodge, showing the way in which the voters' preferences cut across the nominal party lines. The other candidates received varying numbers of ballots. Eleven ballots upon which all the choices had either been elected or eliminated were declared exhausted through failure on the part of the voters to indicate further choices.

DISTRIBUTION OF GOMPERS' BALLOTS

Gompers was now eliminated. Twentytwo of his ballots found their way to Lodge as their next effective choice, sixteen to Borah, fifteen to Debs, and seven to Bryan, while fourteen were by now exhausted.

DISTRIBUTION OF BRYAN'S BALLOTS

Bryan was next eliminated. The next effective choice of thirty-three of the voters was Lodge, and thirty-two Borah, and of eighteen Debs. Forty-eight of their votes were by now exhausted, all of the choices marked having been either elected or eliminated.

DISTRIBUTION OF DEBS' VOTES

Debs, being the lowest man of the three remaining candidates, was now eliminated. One hundred and five of his votes went to Borah and 24 to Lodge and sixty-five were exhausted. As a result of this transfer, Borah, who had been behind Lodge, now forged ahead with a total of 321 to Lodge's 254.

ELECTION ENDED-BORAH ELECTED

Lodge, the lower of the two candidates, is now declared eliminated. Borah is the only candidate that remains and it is accordingly unnecessary to transfer Lodge's votes. Borah is therefore elected to the fifth and last place.

SALIENT POINTS ABOUT THE ELECTION RESULTS

1. How many of the voters were represented by men of their choice?

If we take the number of ballots which had as their first choice those five finally elected, we have the following:

NT-----

	NUMBER
CANDIDATE	FIRST CHOICES
Hughes	679
Wilson	
Addams	
Hoover	
Borah	
Total	1828 or 80.79

N. CLARK & SONS

INCORPORATED 1889

Manufacturers of

ARCHITECTURAL TERRA COTTA, PRESSED BRICK VITRIFIED AND TERRA COTTA PIPE

HOLLOW TILE FIRE PROOFING FIRE BRICK TILE AND KINDRED CLAY PRODUCTS

Office: 112-116 Natoma St. WEST ALAMEDA SAN FRANCISCO

Thus 1828 or 80.7 per cent of the 2167 voters had their first choice elected. This is indeed a great contrast to the results of elections held under our present system of voting.

But it will be asked, what about the ballots cast for Lodge and those that were exhausted? Were not these ballots ineffective and did they not fail to elect any one? Technically speaking this is true, but if these votes are analyzed, it will be seen that only a small fraction of these voters did not see some one of their choice elected. Thus of the 144 "exhausted" ballots, the following numbers saw these relative choices elected:

aw these relative choices elected:	
First choice elected	61
Second choice elected	54
Third choice elected	10
Fourth choice elected	6
Fifth choice elected	1
No choice elected	12
Total 1	++

Lodge, the last man defeated, had 253 ballots at the end of the tally; of these the following saw their choices elected:

ie following saw their choices e	lecte
First choice elected	153
Second choice elected	72
Third choice elected	16
Fourth choice elected	7
No choice elected	5
Total	253

The total number who were thus completely unrepresented was only 17 (12 of the exhausted ballots plus 5 of the Lodge votes.) This was only seventenths of one per cent of the total number of votes cast!

2. Each important group received representation in proportion to its strength. Instead of the majority electing all the representatives and completely excluding the minority from representation as would have occurred had our present system of voting been followed,



American-LaFrance Fire Equipment Mounted on Ford Chassis

The Favored Fire Protection of Most Small Communities

This sturdy apparatus increases the range of protection over that covered by hand or horse drawn equipment. Any member of the fire department who can drive a Ford can operate this car.

The chemical tanks are identical with those used on the largest fire fighting trucks, and are connected by a by-pass system which permits a steady flow of chemical, one tank being recharged while the other is being discharged. Completely equipped with all accessories necessary to successful fire fighting.

Produced by the World's Oldest and Largest Manufacturer of Fire Apparatus

<u> American [a France Fire Engine Company, Inc.</u>

151 NEW MONTGOMERY ST. SAN FRANCISCO, CAL. 1302 WASHINGTON BLDG. LOS ANGELES, CAL. the minority groups were able to elect Wilson and Jane Addams.

3. The voters were enabled to vote for the candidate they liked most without fear of helping the candidate they liked least. Thus take a voter who preferred General Bliss to any other candidate, but who would ordinarily be afraid of doing so, lest he split the Republican vote and allow the Democratic candidates to defeat Hughes and Hoover-under proportional representation, he could vote for Bliss as first choice. Hughes for second. and Hoover for third and know that if his vote failed to elect Bliss, it would then be used for his next choices, if still needed. The same protection, of course. applied in the case of those whose favorite was Debs, but who under our present system are afraid to vote for him, lest by "throwing away" ballots upon him, they would be helping the right wing of political opinion to defeat such candidates as Gompers, Jane Addams, and Woodrow Wilson

4. As a result of the transferable vote, one of the five candidates who received the largest number of first choices was not elected. Debs stood fifth on the list of first choices with 130, but the transfer of the Hughes surplus and the votes of Bliss, Morgan, and Underwood showed that on the whole the voters preferred both Borah and Lodge to him, and these candidates accordingly forged ahead. Yet had it not been for the transferable vote. the 312 more votes than were needed who voted for Hughes and those who voted for the lowest candidates, would have been compelled to see Debs elected in preference to Lodge and Borah, whereas they in reality preferred the two latter candidates. The transferable vote, in other words, prevents a party from being deprived of its proportionate representation because it has one or two popular members who secure far more votes than their needed quota, but whose ballots have marked as second choice a party

The Enjoyable Way to SAN DIEGO

YALE AND HARVARD

Sail on the S S "HARVARD" 4 P. M. Sept. 7th, for the Convention at CORONADO. Return from San Diego Sept. 14 or Sept. 16th.

ROUND TRIP \$28.50

MEALS AND BERTH INCLUDED

LOS ANGELES STEAMSHIP COMPANY

SACRAMENTO: 8th & J Sts. Main 1296 SAN FRANCISCO: 685 Market St. Sutter 651 OAKLAND: 1422 San Pablo Ave. Lakeside 530 member for whom few have voted as first choice.

It is planned to conduct another demonstration election next year when it is hoped that 10,000 ballots will be polled.

Civic and Personal Responsibility For Fire Losses

Among the resolutions adopted by the Chamber of Commerce of the United States at its annual convention in New York in May, was the following on Fire Prevention:

The national loss through the waste of fire mounts upward at a rate which indicates the need of immediate attention in each state and in every city. Within a few years the amount in property values destroyed in the United States by fire has increased until it is annually in excess of the entire cost of the Panama Canal. In large part this figure represents waste which can be prevented by effective action by states and cities. Personal liability for damages accruing to others through fire caused by gross negligence should be enforced in ways which will bring home to individuals their proper responsibility.

Number, Age and Experience of City Managers

The Ninth Yearbook of the City Managers' Association, published April 1, 1923, lists 311 cities which are now operating under the city manager plan, or have adopted it. These range in size from McCracken, Kans., with a population of 491, to Cleveland, Ohio, with 796,841. Only three cities have abandoned the plan by vote of the people during the fifteen years it has been in use.

The number of city manager municipalities in each state is shown in the following table, the columns indicating



PARAGON Fire Hose

"Anything less than the best in fire hose is a losing investment."

United States Rubber Co.

EUREKA FIRE HOSE DEPARTMENT 1104 I. N. VAN NUYS BLDG. LOS ANGELES, CAL.

> 812 SEABOARD BLDG SEATTLE, WASH.



GRIFFITH COMPANY

Owners of
FAIRCHILD-GILMORE
WILTON CO.

Paving Contractors

Rooms 500-504

Los Angeles Railway Building

Los Angeles

EDWARD GLASS

UNDERWOOD BLDG. SAN FRANCISCO

whether the manager is appointed under ordinance or charter provisions:

Ordination of citation	Pro			
State		Chart.	Ord.	Tot.
Arizona		. 1	0	1
Arkansas		. 0	1	ł
California		. 15	15	30
Colorado		. 5	2	7
Connecticut		. 3	0	3
Florida		. 18	2	20
Georgia		9	0	9
Idaho		. 0	1	1
Illinois		0	6	6
Indiana		. 1	0	1
Iowa		2	11	1.3
Kansas		11	1	12
Kentucky		0	2	2
Maine		1	0	1
Mass		4	1	5
Michigan		31	3	34
Minnesota		4	1	5
Missouri		1	1	2
Montana			3	4
Nebraska			0	1
New Jersey			1	1
New Mexico		. 1	2	3
New York		5	1	6
North Carolina		10	4	14
Ohio			î	15
Oklahoma			2	21
Oregon			õ	3
Pennsylvania		ő	9	
South Carolina		4	ó	9
South Dakota			1	2.
Tennessee		7	ô	7
Texas		19	5	24
a Cana				- 5

Utah	0	1	1
Virginia	16	3	2.5
Wisconsin	2	1	3
Vermont	2	1	3
	213	89	302
Canada	8	1	9
	221	90	311

LENGTH OF SERVICE OF CITY MANAGERS
The following table shows the length

of service in one city, of 219 present managers:

ess than 1 year26	5 years to 6 years 17
year to 2 years62	6 years to 7 years 5
years to 3 years51	7 years to 8 years 2
years to 4 years35	8 years to 10 years 1
years to 4 years35	8 years to 10 years 1
years to 5 years19	12 years to 13 years 1

Previous Occupations of City Managers

A study made by John G. Stutz, Executive Secretary of the City Managers' Association, of the data furnished by 196 of the managers for publication in the 1923 Yearbook shows that 85 were engineers previous to their appointment. Of these, 29 had been city engin-

BURNS & McDONNELL

Engineering Company
CONSULTING ENGINEERS

Water Supply, Waterworks, Sewerage and Sewage Disposal, Power Plants, Gas Plants, Valuations and Rate Investigations of Municipal Utilities

LOS ANGELES, CALIF. Marsh-Strong Bldg. KANSAS CITY, MO. Interstate Bldg.



GLADDING, MCBEAN & CO.

USE PERMANENT PIPE FOR IRRIGATION DRAINAGE CULVERTS SEWERAGE

CROCKER BLDG. - SAN FRANCISCO WORKS-LINCOLN, CAL. neers. Others not engineers who have been previously engaged in some form of public service, include 12 city clerks, 10 mayors, 6 councilmen, 4 superintendents of water and light, and 1 chief of police. Of the rest, 9 were university professors, 7 were contractors, and the remainder came from various lines of business and professional and public service activities.

AGE OF CITY MANAGERS

There are now managers in service ranging from 25 to 70 years in age. Data compiled for 213 managers show that the modal age, that is, the age at which there are more managers than at any other, is 39. The median age, the point

where there are an equal number of cases younger and older, falls in the age 43. The distribution of ages by five-year groups follows:

Age	No.	C	Age	No.	00
25 to 30	10	5	50 to 55		
30 to 35	25	11	55 to 60	19	9
35 to 40	47	22	60 to 65	7	4
40 to 45	43	20	65 to 70	2	1
45 to 50	36	16	70 to 75	1	0

The 1923 Yearbook contains, in addition to the foregoing table and other features, articles on accomplishments by several city managers; the Proceedings of the Ninth Annual Meeting, held in Kansas City, November, 1922; and a list of the city managers in the United States and Canada arranged by states and cities.

Sacramento
Capital National Bank Bldg.

San Jose Bank of Italy Bldg. Los Angeles Fay Building

WILLIAM DOLGE & CO.

Certified Public Accountants
Municipal Accounting

Audits, Examinations and Special Examinations. Accounting Procedures for Municipal Utilities. Budget Systems Installed

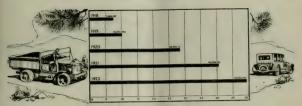
Telephone Sutter 697

369 Pine Street

San Francisco, Cal.

"The Story of the Bates Experimental Road As Told by the Camera"

Is the title of an interesting book just published by the Portland Cement Association. Copies of this book, which is of interest to officials interested in street and road construction, may be obtained by addressing the above Association at 785 Market Street, San Francisco, or 548 So. Spring Street, Los Angeles



549% Gain in Five Years

This chart indicates, in million of square feet, the total area of Asphaltic Concrete base and surface pavements laid in the five western states - California, Washington, Colling and California, Washington, Arizona — during the lastfiveyears. Itahows an increase of \$49% in the use of asphaltic concrete base and suring the period covered.

First cost Slightly less ~ Maintenance cost Materially less

The progressive highway engineers who are finding in asphaltic concrete construction the answer to the demands of the new highway traffic era are steadily increasing in number.

The following excerpts are taken from a city engineer's letter to the city trustees, who recently awarded a contract for 255,-580 square feet of asphaltic concrete:

"This type of pavement (asphaltic concrete) is permanent as the word is used in paving practice. It is most economical, both in initial cost and cost of maintenance. My experience has been that it costs slightly less than any other type of permanent construction and the maintenance is materially less...

"In the construction work, the streets of a community are not closed to traffic for any considerable period of time, as it is perfectly proper to drive over this material the day after it is laid. This eliminates the detouring of traffic and the loss of trade where business streets are to be paved.

...."It is a plastic pavement, which is not seriously injured by expansion or contraction strains or other climatic conditions. It is impervious to water, eliminating the destroying effect of water reaching the subgrade through the pavement. It can be easily repaired, giving a proper bond between the new and the old work. Pavement when laid in two courses practically becomes monolithic, as the two courses readily fuse.

STANDARD OIL COMPANY

ASPHALTIC CONCRETE for durability

CALOL ASPHALT for BEST RESULTS



A Lesson Worth Repeating

I T MIGHT be a pretty good thing to dig back into the past and resurrect some of the arguments for good roads that were advanced when the good roads movement swept the country with the advent of the automobile a couple of decades ago.

It might be well, for example, to remind the public again and again, how greatly it pays to have smooth, easy-riding roads—pays, by cutting out the damaging jars, wrenches and shifting of gears—pays too, in increased comfort and freedom from dirt and delay.

Because all the disadvantages complained of in the ancient and unkept dirt road of yesterday, can easily creep into the improved road of today, unless that road is correctly built of the right materials, and is properly maintained.

The stronger the demand for good roads that are REALLY good, the better. And even the strongest demand in this respect can be met with roads competently built and bound with Gilmore Road Oils. Moreover, they are roads that can be maintained at a minimum of expense.

"Yours for Better Roads and Service"

Gilmore Oil Company

700 Van Nuys Bldg., Los Angeles



THE FUNDAMENTALS OF ZONING

With special reference to the plan for zoning suburban New York

By EDWARD M. BASSETT

Former Chairman of the Heights of Buildings Commission and of the Zoning Commission of New York: Counsel of the Zoning Committee of New York; Legal Director of the Regional Plan innavarated by the Russell Sage Foundation.

(Continued from the June issue.)

The legal staff of the Russell Sage Foundation Regional Plan are now working with officials and citizens of Nassau County and with the New York State Association in an endeavor to perfect a law providing for the harmonious zoning of the entire county. There is no doubt, however, that, in the meantime and for the benefit of other counties of the State, a town zoning law should be adopted by the present legislature.

One of the greatest dangers in town and village zoning is the creation of enormous residence districts in the outlying portions. The reason for this is that business or industry has not developed in these great areas of vacant land and therefore the officials consider that it should all be made residential for the present. The danger lies in the chance that some land owner desiring to start a store or blacksmith shop will file his plans and demand a permit. When it is refused on the ground that the plot is in a residence district, he will immediately apply to the court, requesting the court to command the building commissioner to issue his permit on the



BEAUTIFUL LAWNS

Easily and Economically Kept Beautiful with our Modern
Mowing Machinery

MOWERS FOR HAND-HORSE-POWER OR TRACTOR USE

H. V. CARTER MOTOR CO.

San Francisco

WE SOLICIT MUNICIPAL ORDERS FOR



VITRIFIED CLAY SEWER PIPE AND FERGUSON SEGMENT SEWER BLOCKS

THE PACIFIC CLAY PRODUCTS, INC.

600 AMERICAN BANK BLDG.

LOS ANGELES, CALIFORNIA

FIRE HOSE

The GUTTA PERCHA & RUBBER MFG. CO.

34 FREMONT ST., SAN FRANCISCO, CAL.

ground that it is unreasonable to prevent a store or blacksmith shop on some cross road two miles from the center of the village. He will argue to the court that it is unreasonable, arbitrary and confiscatory to prevent a store or blacksmith shop and thus cause residents of that locality to walk two miles unnecessarily. The court will probably agree with him and say that the plan is unreasonable and therefore void. To prevent this, every zoning plan of a village or town should include small spots in proper locations where stores or light industry can be established. This will not only prevent the maps from being declared void by the courts, but the foresight of officials and property owners can be employed in the original zoning to place these future trades where they ought to go.

Zoning is invalid if it is unreasonable, partial or confiscatory. There are just as many chances of pitfalls in villages and towns as there are in great cities.

Why Zoning Helps Permanence of Home

Not only does the zoning keep business from invading residence districts and make it possible to separate apartment and block house streets from streets of detached private homes, but zoning also makes homes more attractive and permanent because factories cannot invade residence and business districts. Before zoning in Kings and Queens sometimes a small industry would start in the heart of a residence district. It would grow gradually if it succeeded and add extensions. Thus in time the surrounding homes would be blighted. There was no safety in putting up private homes anywhere in suburban Kings and Oueens so long as the store, the garage, the stable or the factory could

This ARMCO CORRUGATED CULVERT



was installed in 1907 in front of the hotel at Sisson, California.

When this photo was taken in February, 1923, the culvert looked and acted very much as it did sixteen years before.

It was made from

"The Iron That's Made To Last"

CALIFORNIA CORRUGATED CULVERT COMPANY

LeRoy St., Los Angeles 5th and Parker Sts., W. Berkeley without asking anybody's consent plant itself next door.

Then too there was another way that factories hurt the community. Industries causing fumes or which rendered the surroundings unsightly would locate in outlying vacant land before it was built up with homes. Sometimes these localities would be the very spots that were the natural home sites of the future working population of the city. The semi-nuisance industries would go out there so as to be free from complaints of residents. Then when homes began to be built nearby the homes would avoid the factory locations. Sometimes a factory covering not more than an acre would cause a blighted or unattractive district in the surrounding 30 acres. An example of this is the unbuilt area around a varnish factory a little south of Atlantic ave. in Union Course, Queens. Hundreds of other examples exist throughout Kings and Queens.

course, factories are just as necessary as stores or residences. There is 100 times as much land set aside for them in Greater New York as will be covered with factories in the next generation, but the point is that the zoning causes new factories to stay in factory locations or along railroads or water courses. A factory is out of place if it has to carry its coal and products far by truck. These trucks smash up the people's pavements unnecessarily. In every way the misplaced factory is an injury to the community.

There are many signs that the protection that zoning has brought to home localities in Kings and Queens is rendering home ownership more desirable and is causing families to live more permanently in one place. The development of all great cities in our country shows a story of constant shifting of homes. Apartment houses do much to encourage this constant shifting. Fami-

PIPE TANKS CULVERTS

For PERMANENCY use STEEL For QUALITY buy "WESTERN"

We furnish Pipe from 1-16" to 1" thick in any diameter.

WESTERN makes STEEL TANKS for all purposes.

Designed, Fabricated, Erected anywhere on the Pacific Coast.

WESTERN CORRUGATED CULVERTS will give service heretofore unknown, as WESTERN CULVERT METAL is of unequaled rust-resisting, non-corrosive Quality. You will find nothing but "WESTERN" Culverts under the State Highways.

Let Us Figure Your Specifications

Western Pipe & Steel Co. of Cal.

444 Market Street SAN FRANCISCO 1758 N. Broadway LOS ANGELES

TAFT BAKERSFIELD

FRESNO

lies who live only a few years in an apartment house take very little interest in the development of their neighborhood. On the contrary whatever encourages home ownership and permanence of families brings about better acquaintanceship, greater local pride and a keener interest in the affairs of one's home town. There are undoubted signs that there is greater permanence of families in the outlying parts of Kings and Oueens than there was before the zoning plan. New York City needs its home owners. It would be a sorry day for Greater New York if it became a place of apartment hotels, apartment houses and tenement houses exclusively. People of very moderate means are going in hordes to small detached homes in the suburban parts of Kings and Queens. Many are moving from tenement houses in the densely populated parts of the city. Better rapid transit is partly responsible for this movement. The zoning law came along none too soon because these new settlers in small homes of their own look to the zoning plan to protect their invested savings.

It is very likely that Jamaica Bay will be a great industrial and shipping area. Few seaboard cities have such a wonderful opportunity at their door, It will take some time for this development to come, but when it does come the zoning plan will have helped to preserve home districts for the factory and shipping workers within a quarter or half mile of Jamaica Bay. This is a region of sandy soil, remarkably suitable for small homes. Much of it lies in Greater New York and is already being preserved by the zoning against sporadic nuisance factories that would injure it for home purposes. Some of it lies in Nassau County where the zoning plan will undoubtedly later be put into force,-Brooklyn Eagle.



TRIDENT METERS FOR ALL SERVICES

Split Case Meters for Warm Climates
C. I. Breakable Frost Bottoms for Cold Climates
Hot Water and Oil Meters. Crest Meters for Large Flows
Compound Meters for all streams, Large and Small

TRIDENT DISC

Sold 158,000 in 1921

A record unsurpassed in the history of

MANUFACTURED BY

NEPTUNE METER CO.

NEW YORK

PORTLAND, SEATTLE, SPOKANE, SAN DIEGO

LOS ANGELES OFFICE AND WAREHOUSE 701 East Third Street



TRIDENT CREST



Pacific Municipalities

A Monthly Review of Municipal Problems and Civic Improvements

OFFICIAL ORGAN OF THE LEAGUE OF CALIFORNIA MUNICIPALITIES



HOTEL DEL CORONADO

LEADING ARTICLES IN THIS ISSUE

Program Twenty-fifth Annual Convention of the League of California Municipalities at Coronado, California

Review of Recent Legislation In California Affecting Municipalities

The Alameda Health Center. By Zdenka Buben, A. B., Health Visitor Alameda Health Center

Publication Office Pacific Building, San Francisco, Cal.

Single Copy 25 Cents

1923 Edition Enlarged and Revised

Street Improvement Laws of California

By Wm. J. Locke
Executive Secretary, League of California Municipalities

AT the last session of the legislature many important changes were made, vitally affecting all our street laws, especially the two most universally used, the Improvement Act of 1911, and Improvement Bond Act of 1915.

We have also added three entire acts to our book as we find that the Street Improvement Act of 1913, and the Street Opening Act of 1903 are extensively used, especially in the southern part of the State.

The following acts are set forth in full, amended to date and containing valuable court decisions.

Improvement Act of 1911. Improvement Bond Act of 1915. Vrooman Street Act of 1885. Street Opening Act of 1889. Street Opening Bond Act of 1921. Change of Grade Act of 1909. Street Improvement Act of 1913. Street Opening Act of 1903. Street Opening Bond Act of 1911.

Ready for distribution about August 15, 1923.

A copy of this book should be in the hands of every City Clerk. City Attorney. City Engineer, Superintendent of Streets. City Treasurer, and City Manager.

Order your copy now, to assure prompt delivery.



A. CARLISLE & CO.

251 BUSH STREET SAN FRANCISCO, CAL.

This is the only street book issued under the supervision of Wm. J. Locke.

Pacific Municipalities

AND COUNTIES

OFFICIAL ORGAN OF THE LEAGUE OF CALIFORNIA MUNICIPALITIES

Entered as second-class matter March 22, 1913, at the Post Office at San Francisco, California, under the act of March 3, 1879.

R.	10	T	X	V	VI	7.7	T
١	$^{\prime}$	L.	$-\Delta$	Λ.	ሌነ	V J	1

TWENTY-SIXTH YEAR

No. 8

Editors										H	A. Ma	SON	and	Wм.	J. Lock	E
Editorial a	ınd	Bu	sine	ss (Offic	e			Fifth F	loor,	Pacifi	c Bu	ildin	g, San	Francis	со

ADVERTISING RATES ON APPLICATION

Address all Communications to "PACIFIC MUNICIPALITIES," Pacific Building San Francisco, California

AUGUST, 1923

NOTICE—Every city belonging to the League of California Municipalities is entitled to a copy of this magazine for each of its officials without extra charge. If not received kindly notify the Secretary.

A. Carlisle & Co., Printers, San Francisco

CONTENTS

Program Twenty-Fifth Annual Convention of the League of California	
Municipalities at Coronado, California	285
Department of Engineers, Councilmen and Street Superintendents	287
Department of Clerks, Auditors and Assessors	290
Department of City Attorneys	291
Health Officers' Section	292
California Association of Dairy and Milk Inspectors	293
Constitution of the League	295
Segment Block Sewers. By George Hyde Emery	297
The Alameda Health Center. By Zdenka Buben, A. B., Health Visitor	
Alameda Health Center	302
What the Cities Are Doing	305
Review of Recent Legislation In California Affecting Municipalities	309

LEAGUE OF CALIFORNIA MUNICIPALITIES

Organized 1897 Affiliated with the Bureau of Municipal Reference, University of California

OFFICERS

President, FRANK C. MERRITT. Assistant City Clerk of Oakland
First Vice-President, FRED C. WHEELER, City Councilman of Los Angeles
Second Vice-President, NORMAN E. MALOUM, City Attorney of Falo Alto
Secretary-Treasurer, H. A. MASON, Bond and Ordinance Expert of the City of San Francisco
Executive Secretary, WM, J. LOCKE
H. G. Marcheller, San Francisco
Official Printers: A. Carlisie & Co., San Francisco
Official Printers: A. Carlisie & Co., San Francisco

INFORMATION BUREAU

The League of California Municipalities maintains in connection with the Secretary's Office, acrea for furnishing city and town officials with information on municipal affairs, and loaning copies of new ordinances and specifications. Officials are urged to make a free use of this Bureau. Kindly send a self-addressed stamped envelope in all cases.

Members of the California League of Municipalities

Orange

Jackson

Alameda

Covina

San Rafael Albany Corte Madera Orland Santa Ana Alhambra Crescent City King City Oroville Santa Barbara Alturas Culver City Kingsburg Oxnard Santa Clara Amador City Daly City Lakeport Pacific Grove Santa Cruz Ansheim Davis Larkspur Palo Alto Delano Santa Maria Angela La Mesa Pasadena Antioch Dinuha La Verne Santa Monica Paso Robles Arcadia Dixon Lemoore Santa Paula Patterson Santa Rosa Arcata Dorris Lindsay Petaluma Arroyo Grande Sausalito Dunsmuir Livingston Piedmont Auburn East San Diego Livermore Sawtelle Pinole Avalon Sebastopol El Cajon Lodi Pittsburg Azusa El Cerrito Selma Lompoc Placerville Bakersfield Elsinore Long Beach Sierra Madre Pleasanton Banning El Segundo Los Angeles Sisson Plymouth Beaumont Soledad Los Banos Point Arena Belvedere Etna Sonoma Los Gatos Pomona Benicia Eureka Sonora Loyalton Porterville Berkeley Exeter Lynnwood South Pasadena Potter Valley Beverly Hills South San Francisco Fairfield Madera Red Bluff Biggs Ferndale Manhattan Beach Redding St. Helena Bishop Fillmore Stockton Manteca Redlands Blythe Fort Bragg Maricopa Suisun Redondo Beach Brawley Fort Jones Sutter Creek Martinez Redwood City Brea Fortuna. Sunnyvale Marysville Reedlev Burbank Fowler Mayfield Susanville Rialto Burlingame Fresno Taft Merced Richmond Fullerton Calexico Mill Valley Tehachapi Rio Vista Calipatria Gilroy Modesto Tracy Riverside Calistoga Glendale Monrovia Tulare Roseville Carmel-by-the-Sea Glendora Montague Ross Turlock Chico Gridley Ukiah Montebello Sacramento Chino Gustine Monterey Upland Salinas Chowchilla Hanford Monterey Park Morgan Hill Vacaville Sanger Chula Vista Hayward Vallejo San Anselmo Healdsburg Claremont Mountain View Ventura San Bernardino Clovis Hemet. Venice Napa San Bruno Coalinga Visalia Hercules National City San Diego Colfax Hermosa Beach Walnut Creek Needles San Fernando Colton Hollister Nevada City Watsonville San Francisco Colusa Holtville Newman Watts San Gabriel Concord Honolulu Newport Beach Wheatland San Juan Corcoran Huntington Beach Whittier Oakdale San Jose Corning Huntington Park Oakland Willits Willows San Leandro Coronado Hyde Park Oceanside San Luis Obispo Winters Woodland Compton Imperial Otai San Marino Yreka Yuba City Corona Inglewood Ontario San Mateo Total

Associate Members-Oregon: Astoria, La Grande







Albany, Oregon — A part of Albany's elevenmiles, Fourth Street. Paved in 1912 with a 3½-inch asphaltic concrete base and 1½-inch asphaltic concrete surface (Warren type). In excellent condition with no mainte-

nance.

First in Building Communities

Albany, Oregon, shows us that the first step towards community development—is to get the community itself in readiness.

Albany's development plan wisely included laying eleven miles of asphaltic concrete pavements. Pay? Albany attracted and has now its canning and packing plants, its furniture factories and its flour mills, a cheese factory and the largest chair factory on the Pacific Coast.

But why asphaltic concrete?—why this type of construction for over 97% of its paved streets? Albany formed its conclusions from its own asphaltic concrete pavements laid in 1909, and from performance records elsewhere—convinced itself that asphaltic concrete costs less to build, less to maintain, and has a longer life; moreover, it can be used immediately after laying without interruption to business or traffic; it does not reflect glare, and is affected neither by climatic changes nor traffic impact.

In your town or city—asphaltic concrete pavements will be an asset gained.

STANDARD OIL COMPANY
(CALIFORNIA)

ASPHALTIC CONCRETE for durability

CALOL ASPHALT for BEST RESULTS

Double "

Railroad Rates

TO

San Diego and Return

rom	San Francisco	and	Return	\$25.0
66	Chico	"	44	27.5
"	Stockton	"	**	22.0
"	Fresno	"	44	17.2
"	San Jose	"	44	23.0
"	Santa Rosa	"	и	26.2
46	Sacramento	"	и	24.0
ш	Santa Barbara	66	"	10.2

Steamship Rates

San Diego and Return From San Francisco

Outside Rooms "B" Deck \$28.50 Inside 28.50 De Luxe Suites \$41.50 per passenger The Harvard leaves San Francisco Friday, Sept. 7th, and the Yale on Saturday, Sept. 8th, at 4 p. m.

Returning Leave San Diego, Friday, Sept. 14th and Sunday Sept. 16th at 9 a. m.

7.00

12.00

HOTEL RATES

AT

Hotel Del Coronado

Special Rates to Delegates and Their Guests AMERICAN PLAN

Single room without bath	\$ 6.00 per day
Double " " "	11.00 " "
Single " private bath	7 00 " "

Make your reservations direct with the Hotel Del Coronado, Coronado, California.

Pacific Municipalities

AND COUNTIES

OFFICIAL ORGAN OF THE LEAGUE OF CALIFORNIA MUNICIPALITIES

Entered as second-class matter March 22, 1913, at the Post Office at San Francisco, California, under the Act of March 3, 1879.

PROGRAM

of the

Twenty-fifth Annual Convention

of the

LEAGUE OF CALIFORNIA **MUNICIPALITIES**

at the

CITY OF CORONADO, CALIFORNIA September 10-14, 1923

OPENING DAY MONDAY MORNING, SEPTEMBER 10, 1923

"THE FETE OF THE SUN"

By Garnet Holme. A PAGEANT.....

On the Grounds of the Coronado Country Club. Author and producer of the mountain play "Tamelpa" on Mt. Tamalpais, the "Desert" play at Palm Springs. "The Mission Play" at Carmel, the "Redwood" play in the National Sequoia Park, and other out-door plays and pageants. Mt. Holme was for seven years associated with the University of California in the Greek Theater, producing Shakespearean plays and old English comedies.

(The gates will be opened to the public at 8 o'clock A. M.)

10 A. M.

Aerial combat-Smoke screen-Acrobatic performance-Re-Fueling in the air-Formation flying -Flying circus.

12 NOON

THE PAGEANT

500 Performers

Music by Dr. H. J. Stewart and a massive symphony orchestra assembled specially for the occasion.

The theme of the spectacle will be to revive the impressions, rites and beliefs of ancient times. The play will be in three episodes. First, the dissipation and careless acceptance by man of the blessings of Nature; second, man's fear and repentance, and the removal of all light; third, the forgiveness and restoration of the favor of the Almightv.

The scenes are laid in a festival place of a great city of the middle ages. Revelry, dancing and careless dissipation hold sway with no thought beyond the immediate

The material climax is reached when the arrogant king orders the massacre of the older senators who oppose his excessive and extravagant wishes. The king's daughter pleads in vain for a more kindly and humane decree and implores her lover, the young captain of the king's guard, to refuse the execution of her father's order. For her interference with a royal command, she is sentenced by the infuriated monarch to die in the torture chamber of the royal prison.

A prophet, a weird soothsayer of the royal household, appears and forbids the punishment and murder. He calls upon the heavens to support him. All eves are turned to the sky and the gradual darkening of the sun is observed. In haste the festivities cease and with solemn ritual, a mighty processional of supplicants approach the high altar seeking divine mercy. The darkness deepens. The prophet stands alone in devout entreaty to the elements. In chaos and fear the terrified people determine to sacrifice the king and his daughter, that the anger of the gods may be assuaged.

The multitude, robed in black, move sullenly to the sacrificial altar. Here and there torches are lit as the dreadful wail and the music of lamentation is heard. The total eclipse is consummated. The king and his daughter must give their lives that

their people may live.

For three minutes during the time of total darkness, the whole spectacle will remain in statuesque repose, without movement, without sound, -a picture made remain in standaspie repose without inforcame, who may a picture made desidate by the departure of the light of day. The prophet moves slowly to the con-demned group as the shadow slowly departs, the light appears as the soft strain of mysterious music gives hope. The pulse quickens and a thrill of joy is experienced as a band of snowy white messengers proclaim that the mercy of the Creator is infinite.

12:57 P. M.

Total Eclipse of the Sun. Finale of the Pageant.

1:20 P. M.

LUNCHEON

MONDAY AFTERNOON, SEPTEMBER 10, 1923

3:00 O'Clock Sharp ENTIRE BODY

Including all departments of the league and the California Association of Dairy and Milk

Inspectors.

OPENING .. Frank C. Merritt, President of the League.

WELCOME TO CORONADO Hon. William E. Harper, Mayor of

Coronado.

RESPONSE Hon. Samuel C. Evans, Mayor of Riverside, and former President of the League.

REPORT OF THE EXECUTIVE SECRETARY.

REPORT OF THE SECRETARY-TREASURER, AND REFERENCE TO COMMITTEE.

THE MUNICIPAL DISTRIBUTION OF MILK. Dr. C. R. Blake, Health Officer of Richmond.

An agitation has been started by the Housewives' League of the East Bay cities for the municipal distribution of milk and making milk a public utility. It is contended that much could be saved by having one instead of many distributors, and it is said that the proposal for municipal distribution meets with the approval of many of the producers. The opponents of the proposition contend that the municipal distribution would be an unwarranted venture in socialism, while, on the other hand, the advocates contend that milk is more a necessity of life than is electricity. tend further that municipal distribution would mean not only a reduction of expense but an assurance of higher quality of milk.

TREE PLANTING AND ITS RELATION TO MUNI-

....W. R. Mitchell. CIPAL PROGRESS

APPOINTMENT OF THE COMMITTEE ON RESO-

RECESS

MONDAY EVENING, SEPTEMBER 10, 1923

7:30 to Midnight

MARDI GRAS ON ORANGE AVENUE, FROM NINTH TO TENTH

TUESDAY MORNING, SEPTEMBER 11, 1923

9 O'Clock Sharp

ENTIRE BODY

Frank C. Merritt, Presiding

THE FUTURE OF ZONING AS BASED ON EXPER-Judge Albert Lee Stephens, former City Attorney of Los Angeles. IENCE TO DATE....

Several months ago the executive secretary sent out a ballot to all the city officials containing a list of subjects proposed for discussion at this meeting. A canvass of the returns disclosed the fact that zoning was by far the most interesting question before the public mind at the present time. Judge Stephens has given a great deal of study to the subject and knows whereof he speaks.

sultant.

One of the most important phases of the zoning problem is in relation to the control of traffic. The congestion of our city streets and the need of parking places which has resulted from the increased use of the automobile have brought the city officials face to face with one of the most difficult problems confronting our municipals. palities.

SAN FRANCISCO'S EXPERIENCE IN ESTABLISH-ING SET BACK LINES.....

R. S. Woodward, Secretary and Engineer of the San Francisco City Planning Commission.

Berkeley.

THE DEVELOPMENT OF REGIONAL PLANNING AND SUBDIVISION CONTROL

G. Gordon Whitnall, City Planning Director, Los Angeles.

ACKNOWLEDGING ART AS AN OBJECTIVE OF

John W. Mitchell, President Municipal Art Commission, Los Angeles. Official Photograph by Harold Taylor.

TUESDAY AFTERNOON, SEPTEMBER 11, 1923

2 O'Clock Sharp

The Department of Clerks, Auditors and Assessors, and the Department of City Attorneys will hold separate meetings in the places assigned. (See elsewhere on program.)

PROGRAM

For the Engineers, Councilmen, Street Superintendents and other officials J. F. Byxbee, Jr., of Palo Alto, Presiding

HIGHWAY AT PITTSBURG, CALI-FORNIA Lloyd Aldrich, Highway Engineer in

charge. Illustrated with Stere-opticon Views.

The test highway constructed in the neighborhood of Pittsburg in Contra Costa County about two years ago in the form of a circular track has been the object of interest among highway engineers not only in California but among the eastern states. This test highway was made of Portland Cement Concrete of varying thicknesses. In some places it was re-inforced by steel, while in others there was nothing but the concrete itself. Narrow tunnels were dug under the pavement in different places and delicate instruments used to mark the effect of heavy toading. and jarring. The results of this test should prove of great interest and much benefit to city officials.

Willite Road Construction Company.

The scenes are laid in a festival place of a great city of the middle ages. Revelry, dancing and careless dissipation hold sway with no thought beyond the immediate present.

The material climax is reached when the arrogant king orders the massacre of the older senators who oppose his excessive and extravagant wishes. The king's daughter pleads in vain for a more kindly and humane decree and implores her lover,

the young captain of the king's guard, to refuse the execution of her father's order. For her interference with a royal command, she is sentenced by the infuriated monarch to die in the torture chamber of the royal prison.

A prophet, a weird soothsayer of the royal household, appears and forbids the punishment and murder. He calls upon the heavens to support him. All eyes are turned to the sky and the gradual darkening of the sun is observed. In haste the featibility, and the state of the sun is observed. In haste the festivities cease and with solemn ritual, a mighty processional of supplicants ap-proach the high attar seeking divine mercy. The darkness deepens. The prophet stands alone in devout entreaty to the elements. In chaos and fear the terrified people determine to sacrifice the king and his daughter, that the anger of the gods may be assuaged.

The multitude, robed in black, move sullenly to the sacrificial altar. Here and there torches are lit as the dreadful wail and the music of lamentation is heard. The total eclipse is consummated. The king and his daughter must give their lives that

total curpes southern their people may live. Their people may live in their people may live for three minutes during the time of total darkness, the whole spectacle will remove statuseque repose, without movement, without sound,—a picture made remove status quarter of the light of day. The prophet moves slowly to the condemned group as the shadow slowly departs, the light appears as the soft strain of demned group as the shadow slowly departs, the light appears as the soft strain of mysterious music gives hope. The pulse quickens and a thrill of joy is experienced as a band of snowy white messengers proclaim that the mercy of the Creator is infinite.

12:57 P. M.

Total Eclipse of the Sun.

1:20 P. M.

Finale of the Pageant.

LUNCHEON

MONDAY AFTERNOON, SEPTEMBER 10, 1923

3:00 O'Clock Sharp ENTIRE BODY

Including all departments of the league and the California Association of Dairy and Milk Inspectors.

OPENING Frank C. Merritt, President of the League.

Coronado.

the League.

REPORT OF THE EXECUTIVE SECRETARY.

REPORT OF THE SECRETARY-TREASURER, AND REFERENCE TO COMMITTEE.

THE MUNICIPAL DISTRIBUTION OF MILK Dr. C. R. Blake, Health Officer of

An agitation has been started by the Housewives' League of the East Bay cities for the municipal distribution of milk and making milk a public utility. It is contended that much could be saved by having one instead of many distributors, and it is said that the proposal for municipal distribution meets with the approval of many of the producers. The opponents of the proposition contend that the municipal distribution would be an unwarranted venture in socialism, while, on the other hand, the advocates contend that milk is more a necessity of life than is electricity. They contend further that municipal distribution would mean not only a reduction of expense but an assurance of higher quality of milk.

TREE PLANTING AND ITS RELATION TO MUNI-

APPOINTMENT OF THE COMMITTEE ON RESO-

RECESS

MONDAY EVENING, SEPTEMBER 10, 1923

7:30 to Midnight

MARDI GRAS ON ORANGE AVENUE, FROM NINTH TO TENTH

TUESDAY MORNING, SEPTEMBER 11, 1923

9 O'Clock Sharp ENTIRE BODY

Frank C. Merritt, Presiding THE FUTURE OF ZONING AS BASED ON EXPER-

IENCE TO DATE ... Judge Albert Lee Stephens, former City Attorney of Los Angeles,

Several months ago the executive secretary sent out a ballot to all the city officials containing a list of subjects proposed for discussion at this meeting. A canvass of the returns disclosed the fact that zoning was by far the most interesting question before the public mind at the present time. Judge Stephens has given a great deal of study to the subject and knows whereof he speaks.

ZONING AND TRAFFIC CONTROL .. Carol Aronovici, City Planning Con-

One of the most important phases of the zoning problem is in relation to the control of traffic. The congestion of our city streets and the need of parking places which has resulted from the increased use of the automobile have brought the city officials face to face with one of the most difficult problems confronting our municipal confidence of the most difficult problems confronting our municipal confidence of the most difficult problems confronting our municipal confidence of the most difficult problems confronting our municipal confidence of the most difficult problems confronting our municipal confidence of the most difficult problems confi palities.

Engineer of the San Francisco City Planning Commission.

EVIDENCE IN ZONING CASES

Hon. Frank D. Stringham, Mayor of Berkelev.

THE DEVELOPMENT OF REGIONAL PLANNING AND SUBDIVISION CONTROL G. Gordon Whitnall, City Planning Director, Los Angeles.

ACKNOWLEDGING ART AS AN OBJECTIVE OF

cipal Art Commission, Los Angeles.

Official Photograph by Harold Taylor.

TUESDAY AFTERNOON, SEPTEMBER 11, 1923

2 O'Clock Sharp

The Department of Clerks, Auditors and Assessors, and the Department of City Attorneys will hold separate meetings in the places assigned. (See elsewhere on program.)

PROGRAM

For the Engineers, Councilmen, Street Superintendents and other officials J. F. Byxbee, Jr., of Palo Alto, Presiding

TEST HIGHWAY AT PITTSBURG, CALI-THE

FORNIALloyd Aldrich, Highway Engineer in charge. Illustrated with Stereopticon Views.

The test highway constructed in the neighborhood of Pittsburg in Contra Costa County about two years ago in the form of a circular track has been the object of interest among highway engineers not only in California but among the eastern states. This test highway was made of Portland Cement Concrete of varying thicknesses. In some places it was re-enforced by steel, while in others there was nothing but the concrete itself. Narrow tunnels were dug under the pavement in different places and delicate instruments used to mark the effect of heavy leading and jarring. The results of this test should prove of great interest and much beaufit to city officials.

C. S. Reed, President of the Western WILLITE PAVEMENT.... Willite Road Construction Com-

THURSDAY MORNING, SEPTEMBER 13, 1923

Frank C. Merritt, Presiding (Entire Body)

(Entire Body)
HOW THE UNIVERSITY MAY ASSIST THE LEAGUE
IN ITS SERVICE TO THE CITIES. . . Pr

Prof. Samuel C. May of the University of California.

In the library of the University of California a vast amount of books and data on various numicipal problems have been cellected which, up to the present time, have not been made use of by the cities. This material belongs to the people of the state, and the authorities of the university would like to see them make more use of it. They believe that the League is the best instrument through which this may be done. Stanford University is anious to cooperate in like manner.

THE EAST BAY MUNICIPAL UTILITY DISTRICT. Marston Campbell, President of the District, and Louis Bartlet, District and former President of the League.

THE NEW MOTOR VEHICLE ACT.

GOLF

J. W. Coleberd, City Attorney of South San Francisco.

THURSDAY AFTERNOON, SEPTEMBER 13, 1923

Selection of the next place of meeting. Reports of committee on resolutions and other committees. Election of officers. Unfinished business. Adjournment.

EL CAJON, LA MESA AND EAST SAN DIEGO WILL ENTERTAIN VISITING LADIES WITH TEA AT GROSSMONT INN Autos will leave Hotel at 2:00 P. M.

THURSDAY EVENING, SEPTEMBER 13, 1923

INSPECTION U. S. S. SEATTLE Courtesy of Admiral Robert E. Coontz Street Cars will leave Hotel at 8:00 P. M.

FRIDAY MORNING, SEPTEMBER 14, 1923 9:00 A. M.

TOURNAMENT CORONADO COUNTRY CLUB Eighteen Holes, Medal Play—Cup to Winner

10:00 A. M.

TOUR OF SAN DIEGO HARBOR ON STEAMER "ESTRELLA" Leaving Tent City Float

Program for the Department of Clerks, Auditors and Assessors

TUESDAY AFTERNOON, SEPTEMBER 11, 1923 2 O'Clock Sharp

W. E. Varcoe of Alameda, Presiding (Appointment of Finance Committee.)

ACCOUNTING SYSTEMS FOR MUNICIPALLY-OWNED UTILITIES

Joseph B. Kahn, Manager of the Municipal Electric Plant of Alameda; J. F. Byxbee, Jr., Manager of the Municipal electric plant of Palo Alto, and Geo. H. Wood, Controller of Accounts, City of Pasadena.

Officials of the privately-owned public utility companies claim that the lower rates established in the case of publicly-owned utilities are enabled by manipulation of the accounts and the transfer of funds so as to deceive the public. On the other hand, the friends of public ownership claim that the accounting systems used in practically all of our cities are those which are suggested by the railroad commission and the state board of control, and they deny that the low rates are due to any manipulation of accounts or the transfer of funds.

THE IMPORTANCE OF DATES ON PETITIONS Wm J Locke

Bruno

(Round Table Discussion.)

RECESS

WEDNESDAY AFTERNOON, SEPTEMBER 12, 1923

THE BUDGET, ITS VALUE AND CONSTRUCTION, Frank Kasson, City Clerk of Palo Alto.

THE CITY CLERK AS AN ADVERTISER.Allen H. Wright, City Clerk of San Diego and former President of the League.

(Round Table Discussion.)

Election of Officers. Adjournment.

Program for the

Department of City Attorneys

TUESDAY AFTERNOON, SEPTEMBER 11, 1923

2 O'Clock Sharp

Arthur T. French of East San Diego, Presiding

NEW LEGISLATION OF INTEREST TO MUNICI-

William Hazlett, City Attorney of South Pasadena, and Chairman of the Legislative Committee of the League.

RECENT CHANGES IN OUR STREET IMPROVE-

of San Mateo.

RECENT COURT DECISIONS OF INTEREST TO MUNICIPALITIES....

............Johnson Puterbaugh, City Attorney of Coronado.

(Round Table Discussion.)

WEDNESDAY AFTERNOON, SEPTEMBER 12, 1923

2 O'Clock Sharn

WHAT ARE LEGAL MUNICIPAL EXPENDITURES. D. J. Hall, City Attorney of Richmond.

SHOULD SECTION 722 OF THE PENAL CODE BE B. Andrews, City Attorney of Chula Vista.

INJUSTICE OF THE PRESENT LAW FOR RECALL-ING PUBLIC OFFICIALS....Arthur T. French, City Attorney of East San Diego.

(Round Table Discussion.)

Election of Officers. Adjournment.

Program

Health Officers' Section League of California Municipalities Coronado, Calif., Sept. 10-14, 1923

MONDAY, SEPTEMBER 10TH

11 A. M.

Indian "Fete of the Sun."

12 M.

Total Eclipse of the Sun.

3 P. M.

General session with the League, at which the question of making the distribution of milk a public utility will be discussed.

A farce comedy by Austin Adams entitled "A Regular Meeting." This play was written specially for the League of California Municipalities.

TUESDAY, SEPTEMBER 11TH

ADDRESS OF WELCOME.

By Frederick Ceres, M. D., U. S. N. President Coronado Board of Health.

OPENING ADDRESS....

By Walter M. Dickie, M. D., President of Health Officers' Section, Secretary, California State Board of Health.

ORGANIZATION OF THE LOS ANGELES COUNTY HEALTH DEPARTMENT.

By J. L. Pomeroy, M. D., Los Angeles, Health Officer of Los Angeles Co.

ORGANIZATION OF A RURAL COUNTY HEALTH

By Lucius F. Badger, M. D., San Luis Obispo, Health Officer of San Luis Obispo County.

ORGANIZATION OF THE SAN JOAQUIN COUNTY HEALTH DISTRICT

By John J. Sippy, M. D., Stockton, Health Officer of San Joaquin Co.

STANDARD PUBLIC HEALTH REGULATIONS FOR By Louis Olsen, Palo Alto, City Health Officer

SMOKER GIVEN BY UNITED STATES ARMY OFFICERS.

WEDNESDAY, SEPTEMBER 12TH

8 P. M.

9 A. M.

PROGRESS IN MOSQUITO CONTROL IN CALI-FORNIA DURING THE PAST YEAR....

By Louva G. Lenert, Sacramento, Engineer in charge of Mosquito Control, California State Board of Health.

THE CONTROL OF TYPHUS FEVER

CITIES OF THE SIXTH CLASS.

By Charles H. Halliday, M. D., Salinas, Health Officer of Monterey County.

TYPHOID FEVER ...

By W. Leland Mitchell, M. D., Santa Ana, Health Officer of Orange Co.

THE USE OF TOXIN ANTI-TOXIN.

By W. H. Kellogg, M. D., Berkelev, Director, State Hygienic Laboratory, California State Board of Health.

8 P. M.

THURSDAY, SEPTEMBER 13TH

9 A. M.

THE APPLICATION OF THE STATE LAW IN THE DISTRIBUTION OF MILK

By William Veit, V. M. D., Los Angeles, Los Angeles City Health

THE SACRAMENTO MILK BOTTLE ORDINANCE.

By George Joyce Hall, M. D., Sacramento, Sacramento City Health Officer.

NUISANCE ABATEMENT.

By Chester G. Gillespie, Berkeley, Director, Bureau of Sanitary Engineering, California State Board of Health.

DOMESTIC SEWAGE DISPOSAL

By R. F. Goudey, Los Angeles, Bureau of Sanitary Engineering, California State Board of Health.

ON THURSDAY A TRIP TO TIA JUANA WILL BE PROVIDED FOR DELEGATES.

FRIDAY, SEPTEMBER 14TH

9 A. M.

The program Friday will be devoted to public health nursing and child hygiene.

TENTATIVE PROGRAM

CALIFORNIA ASSOCIATION OF DAIRY AND MILK INSPECTORS

SEPTEMBER, 10TH

9:30 to 12:00 A. M.

- 1. In response to the address of welcome by Honorable William E. Harper, Mr. Sam Greene will reply in behalf of this association. 2. The President's address to the Association, By Dr. C. G. Cooke, Berkeley.
- 3. Secretary's Announcements, By Dr. George W. Foelschow, San Diego.

2:00 to 5:00 P. M.

1. "THE EFFECT OF PASTEURIZATION ON BAC-TERIAL GROUPS IN MILK"

By Prof. C. S. Mudge, Assistant Professor in Dairy Industry, University of California, Davis.

2. "THE COOPERATIVE CONTROL OF BOVINE TUBERCULOSIS IN CALIFORNIA."

By Dr. Rudolph Snyder, Inspector in charge, United States Bureau of Animal Industry, Pacific Coast Division. Sacramento.

3. "FUNCTIONS OF THE CALIFORNIA STATE DIVISION OF ANIMAL INDUSTRY

By Dr. J. P. Iverson, Chief of the Division of Animal Industry, State Department of Agriculture, Sacramento.

SEPTEMBER, 11TH

9:30 to 12:00 A. M.

"A COMPREHENSIVE SYSTEM OF DAIRY IN-SPECTION FOR ALL DAIRY PRODUCTS".... By Dr. J. J. Frey, Superintendent of

Dairy Service, State Department of Agriculture, Sacramento.

- 2. "SOME TESTS FOR PRESERVATIVES IN MILK", By Dr. Griffin, Los Angeles,
- 3. "AIMS AND OBJECTS OF THE MEDICAL MILK

By Dr. J. P. Bushong, Formerly City Veterinarian, Los Angeles,

AFTERNOON

Sight-seeing trip 2:00 to 5:00 P. M. Dr. Bushong and Dr. Foelschow in charge,

SEPTEMBER 12TH

9:30 to 12:00 A. M.

- 1. "MARKET MILK"
- By Dr. M. E. McDonald, Market Milk Specialist, State Department of Agriculture, Sacramento.
- 2. "THE COMMON SENSE OF VITAMINES IN CON-NECTION WITH MILK PRODUCTION AND
 - PROCESSING". By Professor M. E. Jaffa, Professor of Nutrition, University of California, Berkeley.

2:00 to 5:00 P. M.

- 1. "RECENT DEVELOPMENTS IN MILK INVESTI-
 - GATION" By Professor C. L. Roadhouse, Professor of Dairy Industry, University of California, Davis.
- 2. "THE MILK PRODUCERS ASSOCIATION". By Douglas Young, Manager, Milk Producers Association of San Diego.
- 3. ASSOCIATION COMMITTEE REPORT.

SEPTEMBER 13TH

9:30 to 12:00 A. M.

- 1. "MASTITIS"... By Dr. Maynard Rosenberger, Superintendent Adohr Stock Farms, Van
- 3. A REPORT OF THE CALIFORNIA DAIRY COUNCIL, ITS PURPOSES AND ACCOMPLISHMENTS...By Mr.
 - By Mr. Sam Greene, Secretary and Manager, California Dairy Council, San Francisco.

2:00 to 5:00 P. M.

BUSINESS MEETING AND ELECTION OF OFFICERS.



CONSTITUTION OF THE LEAGUE

ADOPTED BY UNANIMOUS VOTE AT SANTA ROSA SEPT. 28, 1917

The incorporated cities and towns of California, desiring to maintain an organization for their mutual benefit, hereby adopt this constitution for its government.

Name and Object.

The name of this organization shall be the League of California Municipalities. Its objects and purposes are:

(1) To provide means whereby officials and others interested in municipal government may interchange

(2) To maintain an official headquarters and information bureau for the collection and dissemination of knowledge relating to municipal affairs;

(3) To secure the enactment of beneficient legislation for municipalities, and prevent the passage of such measures as may be inimical to their interests;

(4) To prosecute or defend any interest common to its members;

(5) To promote education in municipal govern-

(6) To do any and all other things necessary or proper for the benefit of municipalities.

Each member of the legislative body, and each city clerk, attorney and engineer of the municipalties belonging to the league shall be placed on the mailing list of the official organ and receive a free copy thereof each month. Upon special request any other officials of such municipalities shall be added to the mailing list without charge.

II. Membership.

Any incorporated municipality in the State of California may become a member of the league upon payment in advance of the annual dues as follows: For cities having a population of less than

For cities having a population of more than

30,000 and less than 150,000 50.00

For cities having a population of more than 150,000 60.00

The population shall be based on the decennial Census Report of the United States, next preceding the date of taking out membership.

The incorporated cities and towns of other States and Territories not having a similar organization of their municipalities, may become members of the league upon the payment of dues based on one-half of the scale aforementoned.

Other organizations interested in municipal affairs may be affiliated as associate members without charge, but without having any voice or vote in the management of the league. III. MEETINGS.

The regular annual meeting of the league shall be held in such city as shall have been selected at the preceding meeting, and at such time as may be mutually agreed upon by the officials of such city and the Executive Committee of the league. Special meetings may be held at such times and places as may be determined by the Executive Committee.

Every official of a municipality belonging to the league shall have the right to participate in the

proceedings at any meeting.

A portion of the daily sessions of the league may

be conducted in departments, divided according to the particular line of work of the various officials, as follows:

(1) Engineers, Councilmen and Street Superintendents.

(2) City Attorneys.

(3) Clerks, Auditors and Assessors.

(4) Health Officers.

Any of the foregoing departments may consolidate their meetings for the consideration of matters of mutual interest. Each department will select a president and a secretary from its own members.

All business of the league such as the opening exercises, reports of cities, election of officers, and selection of the next place of meetings must be transacted before the general or entire body.

All voting in the general body, except upon questions of order, shall be by roll call of cities, and each municipality represented at a meeting shall have but one vote.

Except as otherwise herein provided, all meetings will be conducted and governed in accordance with Roberts' Rules of Order.

IV.
OFFICERS AND THEIR DUTIES.

The officers of the league shall consist of a President, a First Vice-President, A Second Vice-President, A Second Vice-President, a Secretary, who shall be ex-officio Treasurer, and an Executive Secretary, to be elected at each annual meeting. They shall hold office until the next annual meeting and until their successors are duly elected. The President will open all meetings of the league, and preside at all sessions of the general body. The First Vice-President shall act in his place and stead in case the President shall act in case of absence or disqualification of both the President and First Vice-President shall act in case of absence or disqualification of both the President and First Vice-President.

THE SECRETARIES AND THEIR DUTIES.

The Secretaries shall have general supervision and control of the organization during the interval between meetings, subject to the direction and approval of the Executive Committee.

The Secretary-Treasurer shall serve as Secretary of the general body at all meetings. As Treasurer of the league, he shall pay the ordinary monthly expenses for salaries and supplies, upon submission of a financial statement by the Executive Secretary supported by proper vouchers. He shall submit an annual report and financial statement at each annual

meeting, showing the receipts and expenditures of

the league since the previous meeting.

The Fxecutive Secretary shall have charge of the headquarters of the league and attend to all correspondence. He shall be on hand at the league headquarters every day during business hours, except when unavoidably prevented. He shall deposit all moneys received from municipalities on account of the league, in some bank approved by the Executive Committee, in the name of the league.

In case any question of policy shall arise which the Secretaries are unable or unwilling to determine, the same shall be referred to the other members of the Executive Committee for settlement, accom-

panied by proper explanations.

The Secretary-Treasurer, Executive Secretary, and employees of the league shall receive such compensation as the Executive Committee may determine; provided, however, the officers directly interested shall have no vote in such case.

In the event that a vacancy should occur in the office of either Secretary during the interval between meetings, the remaining Secretary may appoint a successor pro tem., subject to the approval of the Executive Committee. No item of expense exceeding \$200.00 shall be incurred without the

COMMITTEES AND THEIR DUTIES.

There shall be an Executive Committee of seven members, comprised of the President, Secretaries and president of each of the four departments here-

inhefore mentioned.

The Executive Committee shall have general control and supervision over the league and be empowered to determine all questions of policy which may arise during the interval between meetings. All matters which, in the opinion of the Secretaries, call for extraordinary action shall be submitted to the members of the Executive Committee for consideration, accompanied by proper explanations and recommendations. The President may appoint such other committees from time to time as may be deemed necessary.

Standing committees of five members shall also be appointed by each department. The principal duty of said committees shall be to assist in preparing the program for the annual meetings.

All property of the league, such as desks, books, stationery and other office supplies, and all souvenirs or testimonials presented to the organization shall be kept on deposit in the headquarters of the league.

HONORARY MEMBERS. Every person who has served as an officer of the league shall become an honorary member thereof upon his retirement as an officer of a municipality. Other persons may also be elected honorary members by a majority vote of the general body. Honorary members may participate in the proceedings,

but will not be entitled to vote.

AMENDMENTS.

This constitution may be amended by a twothirds vote at any annual meeting, providing the proposed amendment is submitted in writing on the first day of an annual session, accompanied by the endorsement of not less than five city officials.

Equalization of Tax Assessments

Revaluation of Real Estate and Improvements By Modern Unit Systems of Realty Valuation

Solve Tax Assessment Problem; Establish Equity Between Taxpayers; Assure Necessary Increase In Tax Assessment Total: Added Municipal Revenues with Reduced Tax Rate, and Expanded Bonding Capacity

SYSTEM INSTALLED AND ADOPTED BY

Los Angeles City and County; Stockton, Santa Barbara, Marysville, Benicia, Redding, Manteca, all Arizona and Texas Cities, Portland, Ore., Cleveland, Des Moines, Denver, and Others

Consultation By Appointment. Write

JAMES G. STAFFORD

CONSULTING TAX VALUATION SPECIALIST

Box 400 Pacific Municipalities

529 PACIFIC BLDG., SAN FRANCISCO, CALIF.

SEGMENT BLOCK SEWERS

By GEORGE HYDE EMERY

One of the latest developments in the clay products industry is the use of segmental blocks of vitrified clay for large size sewers. The sizes for which these sewer blocks are applicable range from 30" to 108" inclusive. These are the limiting diameters of stock sizes but the material is also easily applicable to diameters of 12 feet and over.

The Ferguson Segment Sewer Block consists of an outer block and an inner or liner block with a return edge fitting into a groove in the outer block. This gives the system an interlocking feature. Strength and water-tightness are further insured by breaking joints, both laterally and transversely, as is done in all good masonry constitution.

In this age of increasing costs of material and labor, the important factors in building a sewer are speed of construction and enduring quality of materials. These factors are supplied by Ferguson Segment Sewer Blocks. The material in these blocks is so placed as to give maximum resistance at the points of greatest stress.

A very interesting test was conducted during the present season at the Slauson Avenue Plant of the Pacific Clay Products, Inc., Los Angeles. The test was made under the supervision of the Engineering Department of the City of Los Angeles, and observations of deflections were made by Mr. L. P. Kovanda, Senior Chemist of the City Testing Laboratory.

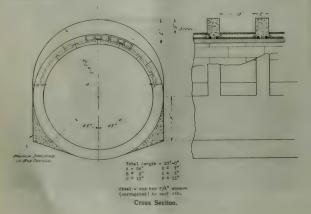


Section Under Test Load



Invert is Laid in Exactly the Same Manner as Standard Ferguson Segment Block Sewers.

A full sized Ferguson Reinforced Segment Block sewer 54" in diameter and 10' long was contructed in the loose, sandy loam of the natural soil which is a characteristic of that particular district. The section was built of a light weight block known as A-1 and was reinforced every 18 inches with curved concrete beams. Reinforcing steel was 34" square corrugated bars, one bar being used for every beam. The bars were bent to a semi-circle and placed within 1 inch of the lower edge of the concrete beam.





Invert Template is Used to Advantage

After setting thirty-seven days, the sand saddle was placed on the section and the load applied. The total load applied was sufficient merely to produce a hair-line crack, and as the comparison was to be made with standard Ferguson Segment Block which had been loaded only to point of fracture and not to complete destruction, loading was discontinued at that point. The accompanying table gives data with reference to the load and deflections for the various loads. The results were highly satisfactory, showing a strength about ten per cent greater in this new design than standard Ferguson Segment Block loaded under identical conditions.



Outer Block on Crown is Laid in Rings



Forms are Placed Over Openings Between Outer Blocks

The purpose of this new design is to give a structure which will show greater resistance to loads under conditions where proper back-filling and tamping at the spring line are difficult to obtain.

The ribs instead of acting as an arch act as a beam and the forces at the spring line are transmitted vertically down through the spring line to the footing. This type of construction will show a much higher factor of safety in loose soil and where excavation is done by drag-line and bucket and the ditch is excavated beyond the section at the spring line. Such methods of excavation put very excessive loads on brick,



Forms are Stripped From Reinforcement Ribs

concrete, and segment block structures when they are designed as an arch, for there is no way in which to solidify the fill back of the spring line to its original firmness. It is the purpose of this new design to overcome this difficulty by use of curved beams which will not depend for stability upon reaction at spring line.

The structure retains all the advantages of Ferguson Segment Block construction and has the additional advantage of greater strength on account of the deep beams. It does not, however, have the disadvantage which is ordinarily connected with concrete poured in place, in that the interior forms on which the segmental block is laid do not have to remain in position until the curved beams set, as the segment block furnish not only an underform but the support to carry the curved beam until it has taken its initial setting.

ENGINEER'S RECORD OF LOAD AND DEFLECTION

Date	Reading	Increment	Load Lbs.	Reading	Deflection in inches	Load per Sq. Ft.	Remarks
4/25 5/11 	1 2 3 4 5 6 7 8 9 10 11 12 13	1455 7150 3815 24700 3000 5000 5000 5000 5000 5000 5000 5	1455 8605 12420 37120 40120 45120 48120 48653 53653 53653 63653 73653	.658 .658 .640 .636 .627 .622 .607 .595 .583 .550 .519	.0 .0 .018 .022 .031 .036 .051 .063 .075 .018 .139	1002 1069 1081 1192 1303 1415 1530 1634	Reading with sand saddle and Platform Faint hair-line crack appeared at crown of

Those witnessing the test were: W. T. Knowlton, Sanitary Sewer Engineer, City of Los Angeles; H. A. Van Norman, Construction Engineer, City of Los Angeles; G. H. Emery, Sales Manager, The Pacific Clay Products, Inc., Los Angeles; C. B. Murphy, Representative, Tropico Potteries, Inc., Glendale, California; W. C. Ferguson, President, Ferguson Segment Block Company, St. Louis.



THE ALAMEDA CITY HEALTH CENTER

By ZDENKA BUBEN, A. B.
Health Visitor, Alameda Health Department

The growth and development of the Alameda City Health Center may be of interest to both the social worker as well as to the municipality in whose mind there may be a doubt whether or not municipal ownership of public utilities is more advantageous to the people at large than private ownership.

Those of us who are interested in constructive social service work know that it is impossible to accomplish anything worthwhile in family case work without having access to adequate medical provision for our people. There is seldom a family applying for aid who has no health problem in the home, whether physical or mental. It may simply be acute or chronic illness, or remediable physical defects such as poor teeth, defective evesight, diseased tonsils; and again it may be a more complicated condition such as the following case. A man applies for work, stating he has difficulty in finding a job. The social worker finds he has had many jobs but has been unable to hold any of them. His family is constantly in need. Why? The psychiatrist finds his intelligence quotient is that of a seven year old child. And a seven year old child is hardly fit to combat the ordinary problems of society. Yet the law allows this man to marry and raise a family of like mentality. Thus we need the psychiatrist (a physician especially trained in diseases of the mind) to examine this man of low mentality and recommend what is best for him in solving the economic problem of the family. If we but find employment for the man, the true problem remains unsolved; in a short time he will be back on our hands again seeking other employment, much time of the social worker is wasted, and naturally there is a financial loss to the community. Thus the trained medical man is vital in helping to solve this social problem.

In 1917 there was created in Alameda, by Charter provision, a Social Service Board, appointed by the City Manager, consisting of five members, the City Manager himself serving ex-officio. The Board holds monthly meetings and 'has charge of all matters pertaining to the care and relief of the needy. It may establish employment bureaus, day nurseries, and the like." The city allows one cent on each thousand dollars assessed valuation of property to be spent on relief work, and the Social Service Board expends this money as it sees fit.

In May, 1920, several citizens of Alameda thought the Social Service Board should establish a Day Nursery for the care of children of pre-school age whose mothers found it necessary to work in order to supplement the family income. Day Nurseries are so seldom necessary except perhaps in large factory communities, and the need of a Health Center seemed so vital to our social service cases that the matter was referred to the local Red Cross Chapter for investigation. Upon consulting the Pacific Division of the Red Cross, a field worker was sent to Alameda to survey the situation. The principals and teachers of the various schools were requested to submit a list of names of families who might derive benefit from a Day Nursery. These homes were visited and inquired into carefully with the revelation that in more than seventy-five per cent of the homes

the need of medical attention was far more urgent than the need of a Day Nursery. The Red Cross recommended that a Health Center be established.

Those most interested in the health work of the community then visited and had personal talks with representatives of other welfare organizations of Alameda, presenting the situation to them and asking their support should a Health Center be organized. The County Board of Supervisors, the City Council, the School Department, the Health Department, the local Red Cross Chapter as well as other private organizations all promised their cooperation.

On November 1, 1920, the City Manager called a meeting of these various individuals interested in the Health Center movement. There were present besides the City Manager, a City Councilman, Superintendent of city Schools, City Attorney, Health Officer, Secretary of the Social Service Board, School Nurse, four prominent physicians, Superintendent of the County Baby Hospital Clinics, and the City Health Visitor. It was the unanimous opinion of this meeting that a Health Center be established and a Ways, Means, and Organization Committee was appointed by the City Manager.

This committee met continuously for several weeks. The City Attorney drew up Articles of Association and By-Laws, the County Board of Supervisors promised to pay the salary of a Public Health Nurse, the City Council appropriated \$500 for equipment, and the local physicians agreed to grant their services without compensation. A small building across the street from the City Hall was rented and renovated to meet the immediate requirements of the clinics. Through the courtesy of the Chief of Police, prisoners in the city jail were released to remodel, paint, varnish and make old furniture into new. When the plan was ready to be presented to the

public for their approval, all civic, fraternal, and welfare organizations of the city were invited to send a representative to a mass meeting held in the Council Chambers of the City Hall, and if in accord with the plans, to become memhers of the Board of Trustees of the Health Center. Forty-three organizations responded favorably, and the Health Center was formally organized on December 28, 1920. There are four officers, President, Vice-President, Secretary and Treasurer, who together with three other members constitute the Executive Board. This governing Board has on it the City Manager, a City Councilman, a member of the Social Service Board, the Chairman of the local Red Cross, the City Health Visitor and two other laymen. The physicians serving on the Health Center staff organized separately and are known as the Medical Board of the Health Center. This does away with the possibility of a lay board entering in upon medical matters foreign to their field. The Health Center opened on March 15, 1921.

The small building rented consists of a waiting room, a small room for the Social Service Department, two clinic rooms, a dark room for the eye, ear, nose and throat department and a work-room for the nurse. A full time Public Health Nurse was employed together with a part-time clerk, and the Social Service Board moved its office from the City Hall into the Health Center building so the Executive Secretary of that Board might also serve as the Executive Secretary of the Health Center.

According to this plan relief cases all come to a central place whether in need of health or material relief. The office functions as a unit and the family case work is far more adequate. It avoids much duplication of effort, duplication of workers and centralizes the welfare work of the city. The Health Center and

Social Service Board are the official welfare organizations of the city.

The Medical Board established the following clinics: General Medicine, General Surgery, Eye, Ear, Nose and Throat, Children's, Women's, Orthopaedic, Skin and Venereal. Through the courtesy of the Alameda County Baby Hospital a Well Babies Conference is conducted once each week to which mothers may bring their children of pre-school age to be weighed and measured. Only a nurse attends these conferences and if medical advice seems necessary the mother is referred to her private physician. Later, a nutrition class under the direction of students in the dietetics department of Mills College was added, also a psychiatrical and neurological department. The patients have increased from one hundred and twenty per month to between three and four hundred. For hospital care there is access to the County Hospital, the County Baby Hospital for children under eight years of age and a local sanatorium where most of the minor operations are performed. All laboratory work is done in the City Laboratory by the City Bacteriologist. X-Ray work has been done in private laboratories until recently when the Ethel Moore Memorial opened in Oakland with X-Ray facilities for health centers throughout the County.

Regarding finances, when we opened in March, 1921, there was the salary of the Public Health Nurse appropriated by the County Board of Supervisors plus Five Hundred Dollars (\$500) from the City Council for equipment. With the new fiscal year the Supervisors appropriated \$3,150 plus \$600 from the Red Cross and \$300 from the school children of Alameda. In addition to this, money was raised by private subscription, through a membership plan somewhat similar to that of the Red Cross. The local women's clubs contributed materially with linen showers, sewing bees,

and volunteer work under the direction of the Executive Secretary.

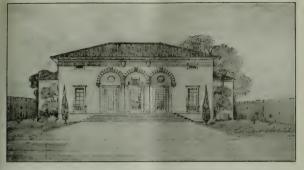
As the work of the Health Center became more known and results accomplished demonstrated, public enthusiasm grew. And now Alameda is soon to open a modern \$30,000 Health Center Building, the money for which has been appropriated by the Alameda Board of Public Utilities from revenue of the Electric Light Plant. May we call your attention to these facts:

In Alameda the minimum charge per month for residence lighting service 500 cents. For the first 50 Killowatt Hours the rate is 6½ cents per KWH; 5 cents for the next 150 KWH; 4 cents for the next 800 KWH, and so on down. Also, Alameda makes a distinction between residence lighting and commercial rates and the latter is lower than the residence lighting.

In other East Bay cities where this public utility is owned by private corporations, and the rates established by the State Railroad Commission, the following is found:

No distinction is made between residence lighting and commercial rates. The general lighting rate is 9 cents for the first 10 KWH; making the minimum charge per month 90 cents; 6 cents for the next 40 KWH; 5 cents for the next 40 KWH; and 4 cents over 200 KWH.

In spite of Alameda's rates being lower and the net profits of the Municipal Electric Light Plant for the last seven years averaging more than \$7000 per year, the city can still further benefit its people by the construction of a modern building to house the official welfare departments of the city. This offers equal opportunity to medical social service to those who might otherwise go without, and thereby strengthens the future generations. Alameda is also striving to keep the welfare work on an official, business-like basis, under trained workers.



Architects Drawing-New Health Center Building, Alameda

The new Health Center Building, a structure of one story and basement will house the offices of the Social Service Board as well as the clinics of the Health Center. The building includes a general office, two social service rooms, a large waiting and community room suitable for health conferences or lectures, a group of clinic and examining rooms for clinics in general medicine, children's, women's,

eye, ear, nose and throat, venereal; a dental department; a small laboratory suitable for clinical work; a plaster room for the orthopaedic work; sterilizing, operating and recovery rooms for operations such as tonsillectomies; doctor's room; staff and rest room with kitchen; a bathroom suitable for hydrotherapy in connection with the neurological clinics, and store space.

WHAT THE CITIES ARE DOING

Pacific Grove has just awarded the contract for paving Lighthouse Avenue (265,000 Sq. Ft.) with 3½ inch aphaltic Concrete base and 1½ inch Warrenite bitulithic top, to Clark & Henry Construction Company of Stockton. Also the contract for paving Forest Avenue (76,000 sq. ft.) with same material.

Plans and specifications for the installation of an extension of the Electrolier System to light the streets being paved, have been adopted, consisting of 43 electroliers. Thirty-eight electrollers were installed early this year.

Yours very truly, E. S. Johnston, City Clerk. Monterey on August 7th, awarded contracts totaling 256,000 square feet of asphaltic concrete pavement, at a total cost of about \$75,000.

Most of this pavement is of four and five inch thickness, laid in two courses.

S. Ruthven of Monterey was the successful bidder.

Very truly yours, H. J. Mason, City Clerk.

Arroyo Grande. An Election was held in this city last Monday, the 16th, for the purpose of voting bonds in the sum of \$22,000.00 to build a bridge across Arroyo Grande Creek at Mason street and the proposition carried by a little more than 4 to 1. It is to be a concrete arch span of 110 feet. W. B. Burch of San Luis Obispo is the engineer.

Very truly,

B. F. STEWART, City Clerk.

Compton. The Board of Trustees, at their regular meeting, June 20, 1923, appointed Trustees J. W. King, J. O. Burris and W. T. Swank to act as their representatives on the City Planning Commission, in conjunction with a similar committee from the Chamber of Commerce, consisting of Mrs. May Carson, Mrs. Chas. Davidson and Mrs. Wm. Kolzen. I. W. King will act as chairman of the Commission, and the secretary will be W. E. Mellinger, secretary of the Chamber of Commerce. It is expected that Mayor W. L. Peck, Trustee J. O. Burris and Secretary W. E. Mellinger will attend the convention of the League at

> Cordially, W. E. Mellinger, Secretary.

Fillmore. During the past fiscal year, ending June 30th, 1923, the city of Fillmore laid 196,283 square feet of pavement, 9,669 lineal feet of curbing, and 34,560 square feet of sidewalks, in addition to which we found it necessary to widen one of our streets, which called for 8,017 square feet of cement guttering.

A new Grammar School, costing some \$200,000.00 has but recently been completed, and bonds aggregating \$200,000.00 more were recently voted for an addition to our Union High School.

The city has outgrown present City Hall quarters, and a movement is now being considered toward bonding the city for much needed improvements along that line. There is also a well defined movement under way for the installation of a large number of ornamental street lights. A new building ordinance is now in process of passage, our present fire limits will be enlarged and fire hazards materially reduced.

Our municipal water system closed the fiscal year with all operating expenses, interest charges and bond redemption taken care of, and a nice balance on the right side of the ledger.

Yours very truly,

C. Arrasmith, City Manager. P. S. We expect to be quite well repre-

sented at the Coronado meeting.

Lodi. This city is completing construction of one of the most advanced types of activated sludge sewage disposal plants in the United States. The plant was to have been in operation in June but unforeseen delays will postpone the opening date until next October. The cost will be in the neighborhood of \$125,000.

Street work amounting to \$150,000 has just started and will add nearly two miles to the existing seventeen miles of paved

Agitation among the citizens will no doubt secure a proper site for a new City Hall next year as nearly everyone is in favor of the securing of better quarters for the city government and a more central location for the offices of the water and power departments.

J. F. BLAKELY, City Clerk.

Mountain View. A resolution of intention to bond Mountain View in the sum of \$10,000 to install an electrolier lighting system on Castro street, was introduced and passed at the last meeting of our Town Board. The installation will call for about one hundred posts.

At the same meeting referred to, a committee was named to enter in a contract with a garbage firm for a regular service in the town.

Our new \$200,000 High School is well under way, but will not be ready for occupancy until the first of next year.

Very truly yours,

CHAS. N. LAKE, Town Clerk.

Oxnard. We have just completed the paying of a number of our streets and alleys at a total cost of \$176,384,20.

This completes the fourth paving contract in the city of Oxnard since September, 1917. The total cost of paying to date for the years 1917-18-20-23 \$548,891.18. Ornamental street lighting system completed in 1921, \$20,000.00.

Have just completed the construction and equipment of a new Fire house. Fire engine house and addition to the Public Library, Sewer Extension, Civic Center, Improvements and extension to the Water System covering new subdivisions. These improvements will total \$85,000.00.

Yours very truly,

FRANK B. PETTIS, City Clerk.

Palo Alto owns forty acres of land on the bay shore and the Board of Public Works has made plans to create a port at that point. The council will appropriate \$7,000 this year to construct bulkheads and road approaches. Later warehouses, a casino, and possibly a depot for receiving crude oil for the municipal plants, will be provided, as funds are available. The property is on the Mayfield Slough and the work to be done this year will make the port available for light-draft vessels.

Palo Alto is continuing its paving program this year, and will expend in this work approximately \$200,000. The work is being done by the Board of Public Works under direct agreement with the property owners, who pay the cost of the improvement in advance. The saving effected is about one-third of the cost that would result under the old method of contracts awarded under the Vrooman Act. The cost of advertising, and inspection and the elimination of the contractor's profit account for the saving. The pavement is of 5-inch concrete. This method of doing the work meets with the almost general approval of the property owners. An occasional owner fails

307 to pay the cost of the paving in advance and in such cases the work is later ordered done under the Vrooman Act. An election to vote on the annexation to the city of 30 blocks, 175 acres, and the vote will doubtless be favorable. The tract in question lies to the south of the present city limits and adjoins the town of Mayfield on the east. A later development will be the consolidation of Palo Alto and Mayfield under one municipal government.

Sacramento made a long stride forward in its municipal advancement on May 16th when the voters endorsed twelve items submitted to them in a bond issue calling for improvements aggregating \$1,772,000.00. Principal among the propositions submitted was \$750,000,00 for a municipal auditorium. Other items included \$216,000.00 for a garbage incinerator and site: \$200,000,00 for water mains extention: \$130,000 for two new fire houses and additional equipment for the department; concrete levee revetment along the Sacramento River, \$90,000; new sewers, \$91,000; paying of main entrances to city with extra heavy type of pavement, \$93,000; removal of Y Street levee, \$65,000: repairing streets facing city property, \$33,000; extension and improvement of police and fire alarm systems, \$25,000; subway through Sixteenth Street at the northerly city limits, \$66,000; (this represents one-half the cost of this improvement; Southern Pacific Company will share this expense); Pedestrain Lane through Twelfth Street subway, \$13,000.

This comprehensive program of municipal improvement financed through a bond issue will enable Sacramento, in one year's time, to acquire these much-needed betterments that would ordinarily take from twelve to fifteen years to accomplish if they were provided for by regular annual budget appropriations. Under this program Sacramento will at one step advance into the forefront of progressive cities in the United States.

An outstanding feature of this bond election with relation to its effect upon the tax rate of Sacramenta for 1924 is that the tax rate for next year will not be increased by so much as one cent. This is due to the economies effected and surplus built up under the City Manager form of government since it has been effective in Sacramento. Sacramento has had the City Manager form of government since July 1, 1921, and during its administration of the city's affairs the finances of the municipality have been built up to a point which will provide for the payment of interest and redemption on the \$1,772,000 bond issue without advancing the tax rate. This is a unique accomplishment in administering the affairs of a city the size of Sacramento, and one which has seldom been equalled by any municipality comparable in size.

H. C. BOTTROFF, City Manager.

Santa Rosa. A \$50,000 contract by the Butte Electrical Company was completed recently to improve the Municipal Water System now giving us 1,500,000 gallons per day, which allows each residence 10,000 gallons free each month.

Contracts have been let to the Warren Construction Company and work is under way to pave 95,000 square yards of Warrenite Bitulithic Pavement at a cost of approximately \$200,000. Street intersections to be paved by the city at the cost of \$30,000.

Plans and specifications have been ordered to construct a bridge over Santa Rosa Creek at an estimated cost of \$255,000. Also plans and specifications are being prepared to improve the Sewage Disposal at an estimated cost of \$200,000.

VIDA McL. DOGGETT, City Clerk.

San Bruno. This city recently voted bonds by a landslide of 12½ to 1, in the sum of \$220,000 for improvements and extentions of the municipal water system. One hundred thousand dollars of these bonds (interest 5%) have been sold on an unconditional bid bringing the very low premium of \$10 for the entire amount.

A Resolution of Intention was adopted August 22nd for street, sidewalk and sewer work in the amount of approximately \$80,000.

Contract was recently awarded for similar work to Bates-Borland, contractors, in the amount of approximately \$240,000.

Further local improvement work to the amount of about \$250,000 is under consideration following petitions by property owners.

The Board of Trustees is considering the purchase of a City Hall site on the state highway.

One million dollars of improvement work is being done this year. This enormous program is made possible, and in fact absolutely necessary by the unprecedented growth of the community.

H. A. Postlethwaite, City Att.

N. CLARK & SONS

INCORPORATED 188

Manufacturers of

ARCHITECTURAL TERRA COTTA, PRESSED BRICK VITRIFIED AND TERRA COTTA PIPE HOLLOW TILE FIRE PROOFING

FIRE BRICK TILE AND KINDRED CLAY PRODUCTS

Office: 112-116 Natoma St. WEST ALAMEDA SAN FRANCISCO

Review of Recent Legislation in California, Affecting Municipalities

CHAPTER 10 (Senate Bill No. 5) (In effect August 17, 1923)

An amendment to Section 12 of the Hotel Act of 1917 by changing the height provisions for semi-fire proof or wooden hotels.

CHAPTER 20 and CHAPTER 231 (Senate Bill No. 122) (Senate Bill No. 462) (In effect August 17, 1923)

An amendment to Section 862 of the Municipal Corporation Act as follows:

Adding to subdivision 4, the right to acquire by purchase or otherwise lands for parks and playgrounds; also adding a new subdivision known as subdivision 4-A, expressly authorizing the acquisition of property for such purposes and the right to improve the same out of the general fund of the city.

Adding to subdivision 11 the right to acquire and improve public mooring places for water craft.

Adding to subdivision 13 the right to acquire and operate bus lines and steam railway spur tracks.

Chapter 17 (Senate Bill No. 106) (In effect August 17, 1923)

This is a new act relating to the deposit of public moneys in banks. It authorizes treasurers to select the bank from among those agreeing to pay the highest rate of interest and not less than two per cent per annum. No deposites shall exceed the paid up capital, exclusive of reserve surplus, of any depository bank, and no treasurer shall deposit more than twenty per cent of the public money in any one bank. The deposits with interest shall be subject to withdrawal on demand provided they may be deposited on different

terms for not more than one year. The money may be deposited in banks outside the state.

The interest shall be on the average daily balance and payable quarterly. There shall be two (2) classes of deposits, active and inactive. The treasurer shall determine what amount shall be deposited as active and what amount as inactive deposits. He may deposit in the Federal Reserve Bank of San Francisco and accept certificates in exchange.

Inactive deposits shall be secured by the deposit of Treasury Notes or Public Bonds approved by the treasurer and the attorney, and shall be at least ten per cent in excess of the amount deposited. Active deposits may be secured by Public Bonds or Surety Bonds of any Surety Company.

The treasurer may demand additional security whenever he deems the same desirable. In case of default of any bank the treasurer shall convert the notes or bonds into money.

The treasurer shall take from such depository a written contract in triplicate setting forth the conditions upon which the funds are deposited. Each depository shall render a quarterly report showing the daily balances.

The treasurer shall not be responsible for any moneys deposited in accordance with the provisions of the Act.

Any officer depositing money belonging to a county or municipality in any other manner than that provided in the Act shall be subject to forfeiture of his office.

CHAPTER 34 (Senate Bill No. 33) (In effect August 17, 1923)

Adding a new section to the Code of Civil Procedure known as Section 3491/2,

requiring that the validity of any proceedings for the annexation of territory to a municipality or for the consolidation of municipalities shall not be contested unless action is brought within three months after the proceedings are complete.

CHAPTER 55 (Senate Bill No. 76) (In effect August 17, 1923)

An amendment to subdivisions 2, 3, 7, 5, 6, of section 856 of the Municipal Corporation Act, as follows:

Corporation Act, as follows:

Sub. 2 is amended so as to provide that the hearing of a petition to incorporate a community, where the proposed boundaries both contain a center of population subdivided into town lots under the Map Act of 1907, and an area of ranch land or outside acreage, the Board of Supervisors shall include within said proposed boundary only such portion of the ranch land or outside acreage as the owners thereof have petitioned to be included.

Sub. 3 provides that an election on the question of incorporation shall be held in accordance with the general election laws of the state except as to the nomination of officers which shall be done in accordance with the election law governing sixth class cities.

Section 856 provides that the elections in sixth class cities shall be conducted under the general election laws applicable to cities of that class.

CHAPTER 56 (Senate Bill No. 149) (In effect August 17, 1923)

An amendment to Sections 2, 3, 4, 9, 11, 13, 16, 17 and 18 of the Improvement Act of 1911, as follows.

SECTION 2 of the act is amended by a more logical statement and arrangement of the various kinds of work which may be done.

SECTION 3 is amended by eliminating the necessity of doing the work to the official grade and providing that it may



Large Fire Departments Recommend the LAFRANCE NOZZLE

Its sturdy construction and adaptability to all conditions place it in a class with all other American-LaFrance products. By its use perfect alignment in the water way is assured. It

is self packing. The handle of Manganese bronze is designed to withstand rough usage. Shut off valve gives operator complete control.

Like all LaFrance products, it is guaranteed by the world's

oldest and largest manufacturer of fire apparatus.

A copy of our Fire Supply Catalogue will be sent promptly upon receipt of your request

AMERICAN-IAFRANCE FIRE ENGINE COMPANY, INC.

151 NEW MONTGOMERY ST. SAN FRANCISCO, CAL. 1302 WASHINGTON BUILDING LOS ANGELES, CAL

NOTICE TO BIDDERS

Sealed proposals will be received at the office of the City Controller, Lewiston, Idaho up to 3:00 o'clock P. M. of Wednesday, September 5, 1923, for furnishing material and labor and constructing improvements to the water works system of said city. Separate bids will be en-tertained under the following sections:

1. Hydrants and Valves: For furnishing

1. o. b. cars Lewiston, Idaho, approximately

nineteen (19) fire hydrants, seventy-nine (79) 4-inch to 16-inch gate valves, one (1) 6-inch and

one (1) 8-inch pressure regulating valve, two (2) 16-inch check valves and sixty-six (66) valve

(2) 16-men cheek varves and sixty-six (bb) varve boxes. Certified cheek-\$250.00; 2. Cast Iron Pipe: For furnishing f. o. b. cars Lewiston, Idaho, approximately One Thousand and Eleven (1011) tons of cast iron

pipe and specials. Certified check, \$4,000.00.

3. Pumps: For furnishing f. o. b. cars Lewiston, Idaho, five (5) motor-driven, horizontal, centrifugal pumps consisting of three (3) low service pumps (1600, 2100, 2800 gallons per minute), one high service pump (2100 gallons per minute) and one (1) filter wash pump (500 gallons per minute); also, starters, starting panels and miscellaneous electrical equipment.

Certified check, \$750.00. 4. Filter Equipment: For furnishing and installing complete equipment for four (4) one and one-half million (1,500,000) gallon per day

and one-nair million (1,500,000) gation per day filter units. Certified check \$2,500.00.

5. Pipe Laying: For hauling and laying approximately six (6) miles of 4-inch to 16-inch cast iron pipe, taking up one (1) mile of 4-inch to 10-inch steel pipe, hauling and setting fire hydrants and valves. Certified check, \$1,500.00.

6. Reservoirs: For furnishing all material and labor and constructing one 3,600,000 gallon

and one (1) 4,000,000 gallon reservoir. Certified

check, \$5,000.00.
7. Purification Plant: For furnishing all labor and material and constructing sub-structure and superstructure of purification plant building, filter basins, mixing chamber, settling basins and filtered water reservoir, new intake lines, moving and re-setting present pumps, and installing new pumps. Certified check, \$5,000.00.

Each bid must be accompanied by a certified check payable to the City Treasurer and certi-

fied to by a local bank.

All of the above work shall be furnished and done in accordance with specifications on file with the City Controller, Lewiston, Idaho and with Burn & McDonnell Engineering Com-pany, Kansas City, Mo.

Anyone desireing a copy of the plans and specifications for personal use may obtain same from the engineers by making deposits of Five Dollars for Sections 4, 5 and 6 and Twenty Dollars (\$20.00) for Section 7, half of which will be refunded if the plans are returned to the office of the engineers within ten (10) days after the date of letting

The Mayor and Council reserve the right to reject any or all bids and to waive any irregular-

ities in the bids.

WILLIAM THOMSON, Mayor. J. R. TURNBULL, City Controller. BURNS & Mc DONNELL ENG. CO.

Consulting Engineers, 402 Interstate Building, Kansas City, Missouri. be done on the grade shown on the plans and specifications.

Section 4 is amended by providing that in case of district assessment the district may be described in the resolution of intention simply by referring to the boundaries as shown on the map on file with the city clerk or city engineer.

Section 9 is amended by providing that in all the resolutions and notices subsequent to the Resolution of Intention it shall not be necessary to describe the assessment district.

Section 11 is amended by striking out the requirement for posting the notice of award of contract.

SECTION 13 is amended by providing that in case no bids are received following the first advertisement the council may re-advertise for bids at any time within six months from the time set for the first reception of bids.

Section 16 is amended by providing that objections may be filed up to the time of the expiration of ten days from the date of the first publication of the notice of award.

Section 17 is amended by providing that in case the work is abandoned by the city at any time, the incidental expenses incurred shall be paid out of the city treasury.

Section 18 is amended so as to provide that the assessment may be made and signed by the city engineer instead of the superintendent of streets.

> CHAPTER 57 (Senate Bill No. 159) (In effect August 17, 1923)

An amendment to Section 11 and 121/4 of the Vrooman Act as follows:

Section 11 is amended by providing that no assessment, warrant, diagram, or affidavit of demand shall be held invalid for any error, informality, or other defect providing the Resolution of Intention has been actually published as required by law.

SECTION 121/4 amends the conditions under which the assessment may be ordered.

CHAPTER 58 (Senate Bill No. 211) (In effect August 17, 1923)

An amendment to Sections 21, 23, 24, 25, 26, 27 and 28 of the Improvement Act of 1911, as follows:

SECTION 21 is amended by providing that as soon as the assessment is made it shall be filed with the city clerk who shall give notice of the same and provide for a hearing to correct any errors or informalities.

Section 23 is amended by requiring that the city engineer's certificate shall be recorded as well as the warrant, diagram and assessment.

Section 24 is amended by simplifying the procedure necessary for demand and payment.

Section 25 is amended by requiring the warrant to be returned by the super-intendent of streets within twenty days after its date instead of thirty days as at present. All assessments remaining unpaid after said twenty days shall draw interest at the rate of ten per cent per annum.

Section 26 requires suit to be brought by any person contesting the validity of any assessment or re-assessment within thirty days after the recording of the warrant, diagram and assessment or re-assessment. It also contains provision that no assessment shall be set aside on the ground that the street or right of way involved had not been legally dedicated or acquired, provided the same is dedicated or acquired at any time before judgment is rendered in the suit.

Section 27 is amended so as to provide that if the court finds an unnecessary number of actions have been



PARAGON Fire Hose

"Anything less than the best in fire hose is a losing investment."

United States Rubber Co.

EUREKA FIRE HOSE DEPARTMENT 1104 I. N. VAN NUYS BLDG. LOS ANGELES, CAL.

> 812 SEABOARD BLDG. SEATTLE, WASH.



GRIFFITH COMPANY

Owners of
FAIRCHILD-GILMORE
WILTON CO.

Paving Contractors

Rooms 500-504

Los Angeles Railway Building

Los Angeles

EDWARD GLASS

UNDERWOOD BLDG. SAN FRANCISCO

brought, where the parties are identical, it may allow costs for one action only. SECTION 28 is an amendment to the provisions relating to the manner of making a re-assessment.

CHAPTER 61 (Senate Bill No. 77) (In effect August 17, 1923)

This is a new law which provides that the Board of Supervisors of any county may, by a four-fifths vote, give financial assistance to any city within the county for the improvement of a city street where said street, or a portion thereof, is of general county interest, and provides further that the Board of Supervisors may declare any street or portion of a street lying within an incorporated city to be a part of the county highway system if the municipal authorities consent thereto.

CHAPTER 63
(Assembly Bill No. 130)
(In effect August 17, 1923)
An amendment to Section 4300-D of

the Political Code relating to the fees payable to marshals and constables.

> CHAPTER 64 (Assembly Bill No. 215) (In effect August 17, 1923)

An amendment to Section 1238 of the Code of Civil Procedure relative to the various public uses for which the right of eminent domain may be exercised.

CHAPTER 76 (Assembly Bill No. 832) (In effect August 17, 1923)

This is a new act granting municipalities the right to construct pipes, conduits, and trunk line sewers in, over or upon any road, street or highway, and providing that in case one municipality desires to use any street of another municipality and the two municipalities cannot agree on the terms thereof, the municipality desiring to use the street with another municipality may bring an action in the superior court of the county for the adiudication of the terms.

BURNS & McDONNELL

Engineering Company
CONSULTING ENGINEERS

Water Supply, Waterworks, Sewerage and Sewage Disposal, Power Plants, Gas Plants, Valuations and Rate Investigations of Municipal Utilities

LOS ANGELES, CALIF. Marsh-Strong Bldg. KANSAS CITY, MO. Interstate Bldg.



GLADDING.McBEAN & CO.

USE PERMANENT PIPE FOR IRRIGATION DRAINAGE CULVERTS SEWERAGE

WORKS-LINCOLN,CAL.

CHAPTER 96 (Assembly Bill No. 81) (In effect August 17, 1923)

This is a new act creating a state commission to authorize the use of voting machines.

> CHAPTER 112 (Assembly Bill No. 476) (In effect August 17, 1923)

An amendment to Section 7 of the Improvement Bond Act of April 27, 1911, by providing that in case of bonds sold above par the excess shall be put into the general fund of the city.

CHAPTER 135 (Senate Bill No. 306)

(In effect August 17, 1923) An amendment to Sections 60, 61, 62, 63, 66, 68, 70 and 72 of the bond provisions of the Improvement Act of 1911.

CHAPTER 140 (Senate Bill No. 435) (In effect August 17, 1923)

An amendment to Section 4 of the Act of 1909 authorizing one municipal corporation to permit another to construct sewers, water mains, etc., at joint expense, and to enter into contracts for that purpose.

CHAPTER 145 (Assembly Bil No. 152) (In effect August 17, 1923)

An amendment to Section 1623 of the Political Code by providing that members of school boards and boards of education shall not be held personally liable for accidents to children coming to or returning from school, or on the premises in connection with the school.

CHAPTER 148 (Assembly Bill No. 34) (In effect August 17, 1923)

An amendment to Sections 3, 4, 5, 9, 12, 13, 14, 15 and 17 of the Improvement Bond Act of 1915.

CHAPTER 153 (Assembly Bill No. 1224) (In effect August 17, 1923)

A new act making it unlawful for any person to appear on any street or highway or other public place with his face partially or fully concealed by a mask, with intent to concel his identity; provided this shall not prohibit the wearing of masks for purposes of amusement.

(Continued on page 317)

Sacramento
Capital National Bank Bldg.

San Jose Bank of Italy Bldg. Los Angeles -Fay Building

WILLIAM DOLGE & CO.

Certified Public Accountants Municipal Accounting

Audits, Examinations and Special Examinations. Accounting Procedures for Municipal Utilities. Budget Systems Installed

Telephone Sutter 697

369 Pine Street

San Francisco, Cal.



Why Not Have Streets That Will Stand It?

Nothing in your town has harder usage than your streets.

They are completely exposed to all the whims of the seasons—and to traffic as well.

Concrete Street pavement cannot blow away. Rain only makes it stronger. It can be built to carry any kind of traffic indefinitely, practically without repairs.

Concrete makes easy driving. Concrete makes driving safe. It is rigid, unyielding, skid-proof. Concrete Streets are as good one time of the year as another. Concrete pavement has the maintenance built into it.

These are some of the reasons for the rapidly growing popularity of Concrete Streets.

Our Booklet R-4 tells other interesting things about Concrete Streets. Write for your copy.

PORTLAND CEMENT ASSOCIATION

548 South Spring Street Los Angeles, California 785 Market Street San Francisco, California

A National Organization to improve and Extend the Uses of Concrete

Offices in 22 Other Cities



NONE OF THESE DESTRUCTIVE FACTORS....

... the shock and the jerk of heavy interurban cars as they stop or start along Brand Boulevard,

.... the incessant shaking and moving of the rails, due to the rocking, rolling and vibrating of the P.E. trains speeding back and forth on this main thoroughfare in Glendale, California,

..... the cutting and crushing effect on the pavements, caused by the tires and wheels of countless heavy automobiles, trucks or wagons that persist in running on these tracks,

...... NONE of these straining factors have the wearing detrimental effect on oil macadam roads that they have on other types of construction.....

...... ESPECIALLY when GILMORE ASPHALTIC ROAD OILS and BINDERS have been used, as in this case, on a section forty feet wide, between California and 10th Streets,

has more life than any other type of road, is always responsive, yielding just enough to pressure, resilient in every cubic inch!!

Gilmore Asphaltic Road Oils for Oil Macadam Construction

GILMORE OIL COMPANY

700 Van Nuys Building Los Angeles, Calif. (Continued from page 314)

CHAPTER 154

(Assembly Bill No. 115)

(In effect August 17, 1923)

A new act enabling municipalities to sell or dispose of the control or management of their water works or parts thereof to a municipal water district.

CHAPTER 163

(Assembly Bill No. 1086) (In effect August 17, 1923)

An amendment to Sections 1 and 4 of the 1907 Act relating to the recording of maps.

CHAPTER 169

(Assembly Bill No. 1201)

(In effect August 17, 1923)

An amendment to the act authorizing cities to acquire public parks outside their boundaries and maintain roads leading to such parks.

CHAPTER 132

(Senate Bill No. 434) (In effect August 17, 1923)

An amendment to Section 1 of the

Act of 1913 providing for the regulation of water companies; also providing a means for determining when the owner of the water supply has a public utility.

CHAPTER 173

(Senate Bill No. 494) (In effect August 17, 1923)

An amendment to Section 11 of the Improvement Bond Act of 1915.

Chapter 178

(Assembly Bill No. 924) (In effect August 17, 1923)

An amendment to Section 15 of the Local Improvement Act of 1901 which provides that if any property sold under the procedure laid down in the act be not redeemed within one year after the sale the tax collector may issue a deed to the property.

CHAPTER 180 (Assembly Bill No. 1198) (In effect August 17, 1923)

An amendment to the Act of March 1, 1897, relating to the jurisdiction of cities over parks owned by them outside the



BEAUTIFUL LAWNS

Easily and Economically Kept Beautiful with our Modern
Mowing Machinery

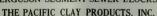
MOWERS FOR HAND-HORSE-POWER OR TRACTOR USE

H. V. CARTER MOTOR CO.

52 Beale Street

San Francisco

WE SOLICIT MUNICIPAL ORDERS FOR VITRIFIED CLAY SEWER PIPE AND FERGUSON SEGMENT SEWER BLOCKS



THE PACIFIC CLAY PRODUCTS, INC.

600 AMERICAN BANK BLDG.

LOS ANGELES, CALIFORNIA

FIRE BELL FOR SALE

An "A" tone Meneely fire bell weighing 1020 lbs. Price \$300 F. O. B. cars or steamer at San Diego. A duplicate would cost today \$700 in New York.

Write GEO. HOLMES, City Trustee, Coronado, Calif.

city limits and giving the cities the same power over the persons and property in outside parks as they have over parks within the city limits.

> CHAPTER 190 (Assembly Bill No. 723) (In effect August 17, 1923)

This amendment adds a new section to the Political Code known as Section 1607A requiring a board of education to keep a report of its financial transactions on file for public inspection pursuant to a form of budget prescribed by the Superintendent of Public Instruction; also requiring the said Board of Trustees to keep on file for public inspection the course of study prescribed for kindergarten, elementary and high schools of the city school district.

CHAPTER 192 (Assembly Bill No. 1042) (In effect August 17, 1923)

An amendment adding a new section to the Penal Code No. 496B whereby

second-hand dealers will be liable for receiving stolen books.

CHAPTER 201 (Assembly Bill No. 1424) (In effect August 17, 1923)

An amendment adding a new section to the Penal Code known as No. 1599A which requires that an arrested person shall be given a receipt without delay for all property taken off his person following his arrest.

CHAPTER 225
(Assembly Bill No. 1353)
(In effect August 17, 1923)

A new Act authorizing irrigation districts to construct and maintain light and power lines over streets and highways.

> CHAPTER 234 (Assembly Bill No. 289) (In effect August 17, 1923)

An amendment to Sections 1, 2, 3, 4, 5, 6, 8, 19, 21 and 26 of the Act of 1919 regulating municipal elections in 5th and

BOUND TO HAVE GOOD ROADS



Volunteer Roadbuilders installing Armeo Culverts, Citrus Heights Road Day, Sacramento County, March, 1923.

CALIFORNIA CORRUGATED CULVERT COMPANY LE ROY STREET, LOS ANGELES FIFTH & PARKER STS., WEST BERKELEY

6th class cities, and providing that the Act may be used for special elections.

CHAPTER 250 (Assembly Bill No. 191)

(In effect August 17, 1923)

A new Act providing for the creation, government and maintenance of sanitary districts and the issuance of bonds for such district.

CHAPTER 263

(Senate Bill No. 716)) (In effect August 17, 1923)

(In effect August 17, 1923)

An Act authorizing cities to acquire garbage disposal sites; also rights of way for roadways leading thereto.

CHAPTER 266

(Senate Bill No. 743)

(In effect August 17, 1923)

A new motor vehicle act.

Chapter 305

(Assembly Bill No. 640) (In effect August 17, 1923)

An amendment to the title and Sections 1, 2, 4 and 36 of the Act to provide

for work upon streets forming the boundaries of any municipality.

CHAPTER 328

(Senate Bill No. 118)

(In effect August 17, 1923)

A new Act limiting the liability of supervisors, city trustees, councilmen, and school trustees for negligence or ommission of any employee, and making counties, municipalities and school districts liable therefor.

> CHAPTER 339 (Assembly Bill No. 263) (In effect August 17, 1923)

A new Act to control and regulate the possession, sale and use of firearms, and providing for the issuance of licenses therefor.

Chapter 382

(Assembly Bill No. 611) (In effect August 17, 1923)

An amendment to Section 1261 of the Political Code relating to elections and

PIPE TANKS CULVERTS

For PERMANENCY use STEEL For QUALITY buy "WESTERN"

We furnish Pipe from 1-16" to 1" thick in any diameter.

WESTERN makes STEEL TANKS for all purposes.

Designed, Fabricated, Erected anywhere on the Pacific Coast,

WESTERN CORRUGATED CULVERTS will give service heretofore unknown, as WESTERN CULVERT METAL is of unequaled rust-resisting, non-corrosive Quality. You will find nothing but "WESTERN" Culverts under the State Highways.

Let Us Figure Your Specifications

Western Pipe & Steel Co. of Cal.

444 Market Street SAN FRANCISCO 1758 N. Broadway LOS ANGELES

TAFT

BAKERSFIELD

FRESNO

providing for the return of the register separately in a sealed envelope.

CHAPTER 386 (Senate Bill No. 29) (In effect August 17, 1923)

A new Act relating to the construction, alteration and maintenance of apartment houses and hotels.

> CHAPTER 387 (Senate Bill No. 141) (In effect August 17, 1923)

An amendment to the Act of 1915 providing for the organization of the railroad commission by giving the commission authority over the regulation of vessels operating on the inland waters of the state.

> CHAPTER 389 (Senate Bill No. 583) (In effect August 17, 1923)

An amendment to Section 10 of the Political Code making the 11th day of November, known as Armistice Day, a legal holiday.

CHAPTER 390 (Senate Bill No. 689) (In effect August 17, 1923)

A new Act to be known as The Pure Milk Law of California, designed to prevent the sale of impure milk, butter, ice cream, etc., and authorizing cities and groups of cities to establish milk inspection service.

> CHAPTER 448 (Senate Bill No. 580) (In effect August 17, 1923)

A new Act requiring the city, county or state engineer, as the case may be, having charge of the engineering work in the construction of any bridge, road, street, etc., except emergency and maintenance work costing less than ten thousand dollars, to keep an accurate account of the cost of such work and upon completion of the same, to file a verified certificate showing the estimated cost with the various bids, and certifying that the work has or has not been done in accordance with plans and specifications.



TRIDENT METERS

Split Case Meters for Warm Climates
C. I. Breakable Frost Bottoms for Cold Climates
Hot Water and Oil Meters. Crest Meters for Large Flows
Compound Meters for all streams, Large and Small

TRIDENT DISC

Sold 158,000 in 1921

A record unsurpassed in the history of the Meter Business

MANUFACTURED BY

NEPTUNE METER CO.

NEW YORK

PORTLAND, SEATTLE, SPOKANE, SAN DIEGO

LOS ANGELES OFFICE AND WAREHOUSE



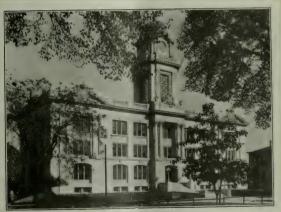
RIDENT CREST

FAR HANCISCE

Pacific Municipalities

AND COUNTIES

A Monthly Review of Municipal Problems and Civic Improvements
OFFICIAL ORGAN OF THE LEAGUE OF CALIFORNIA MUNICIPALITIES



SACRAMENTO CITY HALL

LEADING ARTICLE IN THIS ISSUE

Proceedings of the Twenty-fifth Annual Convention of the League of California Municipalities at Coronado, California.

1923 Edition Enlarged and Revised

Street Improvement Laws of California

Edited by WM. I. LOCKE.

AT the last session of the legislature many important changes were made, vitally affecting all our street laws, especially the two most universally used, the Improvement Act of 1911, and Improvement Bond Act of 1915.

We have also added three entire acts to our book as we find that the Street Improvement Act of 1913, and the Street Opening Act of 1903 are extensively used, especially in the southern part of the State.

The following acts are set forth in full, amended to date and containing valuable court decisions.

Improvement Act of 1911. Improvement Bond Act of 1915. Vrooman Street Act of 1885. Street Opening Act of 1889. Street Opening Bond Act of 1921. Change of Grade Act of 1909. Street Improvement Act of 1913. Street Opening Act of 1903. Street Opening Bond Act of 1911.

Now ready for distribution.

A copy of this book should be in the hands of every City Clerk, City Attorney, City Engineer, Superintendent of Streets, City Treasurer, and City Manager.

Order your copy now, to assure prompt delivery.



A. CARLISLE & CO.

251 BUSH STREET SAN FRANCISCO, CAL.

Pacific Municipalities

AND COUNTIES

OFFICIAL ORGAN OF THE LEAGUE OF CALIFORNIA MUNICIPALITIES

Entered as second-class matter March 22, 1913, at the Post Office at San Francisco, California, under the act of March 3, 1879.

VOL.	XXXVII	
------	--------	--

TWENTY-SIXTH YEAR

No. 9

Editors											Н	. <i>P</i>	٨.	Ma	SON	and	1 1	Vм.	J.	Lo	CKE
Editorial a	nd.	R.,,	ine	() ff.				Fil	th	Flor		p.	cific	. R	ildi	na	San	F	ranc	ince

ADVERTISING RATES ON APPLICATION

Address all Communications to "PACIFIC MUNICIPALITIES," Pacific Building

San Francisco, California

SEPTEMBER, 1923

NOTICE—Every city belonging to the League of California Municipalities is entitled to a copy of this magazine for each of its officials without extra charge. If not received kindly notify the Secretary.

A. Carlisle & Co., Printers, San Francisco

CONTENTS

REGISTER OF DELEGATES IN ATTENDANCE AT THE 25TH	
ANNUAL CONVENTION	323
PROCEEDINGS OF THE 25TH ANNUAL CONVENTION OF THE	
LEAGUE OF CALIFORNIA MUNICIPALITIES	330
OPENING ADDRESS. By Frank C. Merritt, President of the League	330
ADDRESS OF WELCOME TO CORONADO. By William E. Harper,	
Mayor of Coronado	331
RESPONSE TO ADDRESS OF WELCOME. By Samuel C. Evans,	
Mayor of Riverside	331
REPORT OF THE EXECUTIVE-SECRETARY.	332
REPORT OF THE SECRETARY-TREASURER	335
AMENDMENTS TO THE CONSTITUTION OF THE LEAGUE,	
ADOPTED AT CORONADO, SEPT. 13TH, 1923	337
RESOLUTIONS ADOPTED	338
ADDRESS OF PRESIDENT-ELECT CHAS. N. KIRKBRIDE	340
ASBESTOPHALT PAVEMENT. By August E. Schutte	341
A NEW TYPE OF DEEP WELL PUMP.	345
RECENT ZONING DECISIONS OF INTEREST	350
REVIEW OF THE LATEST BOOKS AND ARTICLES ON CITY	
PLANNING	359

LEAGUE OF CALIFORNIA MUNICIPALITIES

Organized 1897
Affiliated with the Bureau of Municipal Reference, University of California

OFFICERS

President, CHAILLES N. KHIKRIKIDE, of San Mateo
Vice-President, NORMAN E. MALESHAK, Cits Attorney of Pale Alto
Secretary-Treasurer, H. A. MASON, Bond and Ordinance Expert of the City of San Francisco
Executive Secretary, WM, J. LOCKE
Headquarters: Pacific Building, San Francisco
Official Printers: A. Carillaé Co., San Francisco

INFORMATION BUREAU

The League of California Municipalities maintains in connection with the Secretary's Office, a Bureau for furnishing city Municipalities maintains in connection with the Secretary's Office a Bureau. For furnishing capies of new ordinances and specifications. Officials are urged to make a free use of this Bureau. Kindly send a self-addressed stamped envelope in all cases.

Members of the California League of Municipalities

Alameda	Covina	Jackson	Orange	San Rafae	1
Albany	Corte Madera	Kennett	Orland	Santa Ana	
Albambra	Crescent City	King City	Oroville	Santa Barl	hera
Alturas	Culver City	Kingsburg	Oxnard	Santa Clar	ra
Amador City	Daly City	Lakeport	Pacific Grove	Santa Cru	
Anaheim	Davis	Larkspur	Palo Alto	Santa Man	
Angels	Delano	La Mesa	Pasadena		
Antioch	Dinuba	La Verne	Paso Robles	Santa Mor	
Arcadia	Dixon	Lemoore	Patterson	Santa Pau	
Arcata	Dorris	Lindsay	Petaluma	Santa Ros	a
Arroyo Grande	Dunsmuir	Livingston	Piedmont	Sausalito	
Auburn	East San Diego	Livermore	Pinole	Sawtelle	,
Avalon	El Cajon	Lodi	Pittsburg	Sebastopo	1
Azusa	El Cerrito	Lompoc	Placerville		a
Bakersfield	Elsinore	Long Beach	Pleasanton	Sierra Ma	are
Banning	El Segundo	Los Angeles	Plymouth		
Beaumont	Emeryville	Los Banos	Point Arena	Soledad	
Belvedere	Etna	Los Gatos	Pomona	Sonoma	
Benicia	Eureka	Loyalton	Porterville	Sonora South Pas	
Berkeley	Exeter	Lynnwood	Potter Valley		Francisco
Beverly Hills	Fairfield	Madera	Red Bluff	St. Helena	
Biggs	Ferndale	Manhattan Beach		Stockton	
Bishop	Fillmore	Manteca	Redlands	Suisun	
Blythe	Fort Bragg	Maricopa	Redondo Beach	Sutter Cre	a la
Brawley	Fort Jones	Martinez	Redwood City	Sunnyvale	
Brea	Fortuna	Marysville	Reedley	Susanville	
Burbank	Fowler	Mayfield	Rialto	Taft	,
Burlingame	Fresno	Merced	Richmond	Tehachap	
Calexico	Fullerton	Mill Valley	Rio Vista	Tracy	
Calipatria	Gilroy	Modesto	Riverside	Tulare	
Calistoga	Glendale	Monrovia	Roseville	Turlock	
Carmel-by-the-Sea		Montague	Ross	Ukiah	
Chico	Gridley	Montebello	Sacramento	Upland	
Chino	Gustine	Monterey	Salinas	Vacaville	
Chowchilla	Hanford	Monterey Park	Sanger	Valleto	
Chula Vista	Hayward	Morgan Hill	San Anselmo	Ventura	
Claremont	Healdsburg	Mountain View	San Bernardino	Venice	
Clovis	Hemet	Napa	San Bruno	Visalia	
Coalinga	Hercules	National City	San Diego	Walnut Cr	rook
Colfax	Hermosa Beach	Needles	San Fernando	Watsonvil	
Colton	Hollister	Nevada City	San Francisco	Watts	
Colusa	Holtville	Newman	San Gabriel	Wheatland	đ
Concord	Honolulu	Newport Beach	San Juan	Whittier	
Corcoran	Huntington Beach		San Jose	Willita	Willows
Corning	Huntington Park	Oakland	San Leandro	WHAT .	Woodland
Coronado	Hyde Park	Oceanside	San Luis Obispo	Yraka	Yuba City
Compton	Imperial	Ojai	San Marino	Tota	
Corona	Inglewood	Ontario	San Mateo	lota	1 243

Associate Members-Oregon: Astoria, La Grande

Pacific Municipalities

AND COUNTIES

OFFICIAL ORGAN OF THE LEAGUE OF CALIFORNIA MUNICIPALITIES

Entered as second-class matter March 22, 1913, at the Post Office at San Francisco, California, under
the Act of March 3, 1879.

REGISTER OF THE DELEGATES AND OTHERS IN ATTENDANCE AT THE 25th ANNUAL CONVENTION OF THE LEAGUE OF CALIFORNIA MUNICIPALITES, AT CORONADO, SEPTEMBER 10-14. 1923

Chas. E. Ashburner, City Manager, Stockton; C. Arrasmith, Manager, Fillmore; M. E. Arneric, Councilman, San Jose; T. E. Awbrey, Clerk, Exeter; Ö. T. Austin, Councilman, Bakersfield; L. L. Andrews, City Council, Corona; Tom J. Allen, City Manager, Coronado; A. J. Addis, Trustee, National City; Miss Lucile Atwater, Pasadena; Donald Arrasmith, Fillmore; Carol Aronovici, Berkeley; Joseph A. Allard, Ir., La Verne; Mrs. L. L. Andrews, Corona; Mrs. T. J. Allen, Coronado; Miss Arneric, San Jose; C. B. Abbott, Water Works Supply Co., San Francisco; R. E. Anderson, C. L. Best Tractor Co., San Leandro; J. J. Backus, Chief Inspector of Buildings, Los Angeles; Dr. L. F. Badger, County Health Officer, San Luis Obispo; Dr. J. G. Baird, Health Officer, Riverside; Dr. M. C. Bamjee, Housing and Sanitary Bureau, Los Angeles; Louis Bartlett, Ex-Pres. League of California Municipalities, member East Bay Municipal Utility District; Mary S. Bartlett, City Planning Secretary, Los Angeles; E. Geoffrey Bangs, Director of Housing, Cal. Immigration and Housing Com., San Francisco; Chas. E. Baer, Councilman, Bakersfield; L. B. Barnes, Trustee, Chula Vista; John L. Bacon, Mayor, San Diego; L. F. Barzellotti, City Engineer, Lodi; Arthur L. Barlow, Milk Inspector, L. A. Health Dept., Pomona; O. S. Bemis, M. D., Health Officer, Riverbank; S. G. Bennett, City Engineer, Oxnard; Alexander Beck, City Councilman, Long Beach; S. L. Berkeley, Mayor, Santa Monica; C. H. S. Becks, City Councilman, Long Beachts, E. Berkeley, Mayorf, Santa Monica; C. H. S. Bidwell, Councilman, Sacramento; P. E. Binder, Trustee, El Segundo; M. L. Birnie, City Clerk, Chino; A. F. Black, Trustee, Santa Maria; Dr. C. R. Blake, Health Officer, Richmond; Lewis P. Black, City Clerk, Monrovia; John R. Blakeston, Deputy City Clerk, East San Diego; Frank M. Booth, Councilman, Marysville; E. V. Bogart, City Clerk, Lindsay; E. C. Bond, M. D., Health Officer, Hanford, Archer Bowden, City Attorney, San Jose; Nicholas Bowden, Asst. City Attorney, San Jose; R. W. Barrett, City Attorney, San Jose; Nicholas Bowden, Asst. City Attorney, San Jose; R. W. Barrett, City Attorney, Santa Rosa; Burr A. Brown, Asst. City Attorney, Long Beach; H. C. Brown, M. D., Health Officer, San Jose; A. E. Brock, Mayor, Redlands; C. F. Brouillard, Councilman, Redding; J. A. Breuner, City Attorney, San Leandro; W. C. Bryson, Chairman of Board, El Segundo; John Brown, City Trustee, Chino; Wm. L. Bray, City Attorney, Placerville; A. F. Bray, City Attorney, Martinez; Dr. F. W. Browning, Health Officer, Hayward; C. V. Buckner, Trustee, Lemoore; S. F. Butler, Health, Salinas; J. F. Byxbee, City Engineer, Palo Alto; Bill Byxbee, Asst. City Engineer, Palo Alto; G. A. Boulette, Trustee, National City; Virgilio Bruschi, Councilman, San Diego; Dr. J. P. Bushong, Veterinarian to L. A. County Medical Milk Com., Los Angeles; Frederick Baker, City Attorney-Montebello, Sierra Madre, Avalon, Los Angeles; Mrs. L. F. Badger, San Luis Obispo; Mrs. D. V. Comer, C. C. P. L. J. M. C. P. C. Charles, Mrs. D. C. Charles, Mrs. D. P. C. Charles, Mrs. D. C. Charles, Mrs. D. P. C. Charles, Mrs. D. C. Charles, Mrs. D. C. Charles, Mrs. D. C. Charles, Mrs. D. Charles, Mrs. D. C. Charle Mrs. R. K. Barry, San Diego; J. M. Ball, Warren Bro. Co., Los Angeles; Mrs. L. F. Barzellotti, Lodi; Mrs. O. S. Bemis, Riverbank; Miss Mildred E. Beaus, San Jose; Mrs. Alexander Beck, Long Beach; Mrs. F. F. Bent, Los Angeles; Mrs. P. F. Binder, El Segundo; M. N. Bird, James Jones Co., Los Angeles; Mrs. M. N. Bird, James Jones Co., Los Angeles; Mrs. M. N. Bird, James Jones Co., Los Angeles; Mrs. M. N. Bird, James Jones Co., Los Angeles; Mrs. M. L. Birnie, Chino; J. A. Blood, Standard Oil Co., Fresno; Russell V. Black, Palo Alto; Mrs. E. C. Bond, Hanford; Carol Bond, Hanford; Lee Boyle, Portland Cement Assn., Santa Ana; Mrs. Burr A. Brown, Long Beach; A. F. Brough, Warrenite-Bitulithic, Oakland; C. A. Braslan, Neptune Meter Co., Los Angeles; Mrs. C. F. Broughlard, Redding; Mrs. W. C. Bryson, El Segundo; Albert H. Brown, The Union, San Diego; Frank M. Brooks, Art Concrete Works, Pasadena; E. A. Brecht, Warrenite-Bithulithic, San Diego; E. A. Brecht Warrenite-Asbestophalt, San Diego; A. F. Brough, Warrenite-Asbestophalt, Oakland; Grace A. Brock, Redlands; A. J. Buell, Los Angeles; Mrs. A. J. Buell, Los Angeles; J. S. Burdge, Warren Bros. Co., Los Angeles; Mrs. J. F. Byxbee, Palo Alto; Mrs. O. Buckhout, San Diego; J. R. Barker, Neptune Meter Co., San Francisco; Jim Blood, Standard Oil Co.

H. D. Chapman, City Eng'r and Supt. of Streets, Richmond; Lt. J. E. Carmile, Med. Adm. Corp.-Presidio, San Francisco; Dr. Frederick Ceres, Pres. of Board of Health, Coronado; John Charlesworth, Councilman, Stockton; J. P. Campbell, Auditor, Stockton; T. W. Cate, Adv. Mgr. Neuner Corp., Los Angeles; M. H. Carey, Councilman, Richmond; J. T. Carnahan, Asst. City Engineer, Bakersfield; L. Case, Mayor, Azusa; P. A. Callaghan, Alderman, Watsonville; Miss Bessie Chamberlain, Clerk, Pasadena; C. C. Conrad, Chief of Police, South San Francisco; C. W. Cobb, City Clerk, Tulare; Chas. A. Cover, Councilman, Long Beach; J. W. Coleberd, City Attorney, South San Francisco; Prescott F. Cogswell, Supervisor, Los Angeles; J. H. Cochran, Pres. Board of Trustees, Mountain View; J. G. Crichton, Police Judge, Fresno; Dr. P. J. Cuneo, Health Officer, Bakersfield; F. A. Cunningham, City Trustee, South San Francisco; F. W. Cuff, Pres. Board of Trustees, Brawley; Marston Campbell, Pres. East Bay Utilities District, Oakland; W. D. Clarke, City Engineer, Bakersfield; Mrs. L. Margret Creamer, Dept. City Treasurer, East San Diego; W. Tilden Clark, City Clerk of Coronado, Coronado; Geo. L. Chaney, Martinez; P. L. Chattock, Standard Oil Co., Los Angeles; C. H. Cheney, Redondo Beach; Mrs. H. D. Chapman, Richmond; Lloyd C. Campbell, H. D. Churchill Co., Los Angeles; J. E. Clifford, Calif. Willite Co., Los Angeles; Mrs. J. H. Cochran, Mountain View; Mrs. C. A. Cover, Long Beach; Reeve Conover, City Planning Commission, Pacific Grove; Dr. F. E. Covey, Alhambra; E. F. Cramer, Calif. Willite Co., Los Angeles; W. D. Crook, C. L. Best Tractor Co., Los Angeles; Mrs. J. G. Crichton, Fresno; Mrs. P. J. Cunco, Bakersfield; J. Leslie Cutler, City Planning Commission, Coronado; D. H. Dodge, Alderman, Watsonville; Mrs. S. Dalziel, City Trustee, San Leandro; S. A. Davis, Councilman, Glendale; Dr. W. S. Davis, Health Offser, Corona; Glenn M. DeVore, Commissioner, Fresno; H. L. Dearing, City Attorney, Corona, Grein M. Devote, Coliminstonic, Fresh, H. E. Deaning, City Atombo, Orange; Harry G. Denton, City Clerk, Sacramento; Geo. W. Destosier, M. D., County Health Officer, Colusa; Phil. J. Divver, Jr., City Assessor, Marysville; R. M. Dorton, City Manager, Pittsburg; J. Dockstader, Mayor of Lamoore, Knigs City; Mrs. J. H. Dodge, R. N., City Health Officer, City Nurse, Banning; Vida M. L. Doggett, City Clerk, Santa Rosa; T. B. Downer, City Engineer, Alhambra; F. L. Douglas, City Engineer, Covina; A. H. Drexler, City Clerk, Santa Maria; C. Drath. man, Building Inspector, Redwood City; W. M. Dickie, Sec. State Board of Health. Sacramento; Otto H. Duelke, City Clerk, Inglewood; Ben F. Dupuy, City Engineer, Glendale; Idabel Durgan, R. N., County Nurse, Orange County; J. O. Durrell, City Clerk, Azusa; Thos. W. Dupes, Building Inspector, Bakersheld; F. C. Dyer, City Engineer, El Centro; Mrs. Dr. W. S. Davis, Corona; Roy G. Davis, American La France Fire Eng. Co., Los Angeles; Mrs. Glenn M. DeVore, Fresno; Mrs. J. W. Dockstader, Lemoore; M. E. McDonald, Market Milk Spec. State Dept. of Agriculture, Sacramento; A. M. Donaher, American La France Fire Eng. Co., Los Angeles; Mrs. F. L. Douglas, Covina; H. M. Dudley, McWane Cast Iron Pipe Co.; Jay Dutter, So. Cal. Rep. Cal. Dairy Council, Los Angeles; Mrs. J. O. Durrell, Azusa.

O. M. Easterday, Councilman, Palo Alto; Dr. A. O. Eckandt, Sierra County Health Officer, Downieville; John N. Edy, City Manager, Berkeley; A. J. Eddy, City Engineer, Berkeley; W. F. Edmonds, Health Officer, Lemoore; Miles S. Edgerton, Trustee, National City; Dr. Ehle, County H. D., Lassen County; Leslie Engram, Clerk of City of Redding, Redding; W. M. Erwin, City Trustee, Hanford; S. Evans, Mayor, Riverside; Wilbur W. Easton, City Clerk, East San Diego; W. S. Farley, City Engineer, Arcata; E. Paul Ford, City Engineer, East San Diego; W. S. Farley, City Engineer, Arcata; E. Paul Ford, City Engineer, East San Diego; W. S. Farley, City Engineer, Leslie Engram, Redding; John H. Engram, Redding; Dr. G. W. Foelschow, Health Dept., San Diego; J. A. Fritz, Trustee, National City; R. C. Farmer, Street Supt., Alhambra; Will S. Fawcett, Chairman Board of Trustees, El Centro; J. O. Ford, Assessor and Tax Collector, Richmond; Harry E. Foster, Health Officer, Oakland; Mary Foster, Planning Commissioner, Long Beach; John H. Flynn, Housing and Sanitation Dept. Health, Los Angeles; Ammis L. Fletcher, Supt. of Social Welfare, Long Beach; F. C. Froehde, City Engineer, Pomona; Arthur T. French, City Attorney, East San Diego; J. E. Frazier, Trustee, Gridley; J. J. Frey, Supt. Dairy Service, State Dept. of Agriculture, Sacramento; Claude T. Faw, Calif. Corrugated Culvert Co.; F. F. Foster, Sales Mgr. Bent Concrete Pipe, Los Angeles:

P. C. Gilberson, M. D., Health Officer, Fullerton; C. G. Gillespie, Eng'r State Board of Health, Berkeley; R. F. Govdey, Eng'r State Board of Health, Los Angeles; Howard E. Gates, Trustee, Anaheim; E. J. Garrard, Councilman, Richmond; F. H. Gein, Health Officer, Claremont; John A. Gerow, Trustee, El Segundo; Frank N. Gibbs, City Trustee, Anaheim; O. A. Gierlich, City Engineer—El Monte, Sierra Madre and Claremont, Monrovia; Wm. E. Ginder, City Attorney, Calexico; Allen F. Gillihan, M. D., State Dist. Health Officer Calif. State Board of Health; C. B. Goodwin, City Manager, San Jose; Mrs. D. B. Goldsmith, Reception Committee, East San Diego; D. B. Goldsmith, Trustee, East San Diego; Fred Goble, City Attorney, Santa Maria; Chas. Goetz, Trustee, Sonora; Dan W. Gray, Councilman, City of San Jose; Frank B. Graves, City Attorney, Hanford; Robert Greig, Bldg. Official Conference, Berkeley; Sam H. Greene, Sec. Cale Dairy Council; L. A. Greenlaw, City Trustee, Sonora; Chas. A. Griffith, City Councilman, Bakersfield; Henry C. Grinager, Trustee, Hemet; A. R. Gunn, Street Supt., El Segundo; Miss Myrtelle L. Gunsul, City Auditor, Long Beach; O. E. Gunther, Chairman of Board of Trustees, Orange; C. W. Gwen, Water Supt., Monrovia; Kenneth A. Gardner, Sec. City Planning Commission, San Diego; Geo. J. Galloway, Housing and Sanitation L. A. Health Dept., Los Angeles; Mrs. C. B. Goodwin, San Jose; E. F. Glassbrook, Hersey Mfg. Co., San Francisco; L. M. Gosney, Mgr. Eureka Fire Hose Dept., Los Angeles; Mrs. Chas. Goetz, Sonora; Mrs. F. B. Graves, Hanford; Mrs. L. A. Greenlaw, Sonora; Mrs. Alex. James, Fillmore; Mrs. O. A. Gierlich, Monrovia; Thos. R. Hayes, Chairman City Planning Commission, Monrovia; W. Harnisch, Milk Inspector, Los Angeles; C. E. Hams, Trustee, Burbank; Dr. G. J. Hall, City Health Officer, Sacramento; Geo. Haberfelde, Mayor, Bakersfield; Emma M. Hann, City Clerk, Berkeley; D. J. Hall, City Attorney, Richmond; C. H. Halliday, Health Officer, Monterey County; Burnett Hamilton, Supt. of Streets and City Engineer, Alameda; James Harper, Mayor, Pacific Grove; Wm. E. Harper, Mayor, Coronado; H. Hawley, Mayor, Delano; W. H. Hall, City Trustee, East San Diego; John A. Held, Councilman, San Diego; Vern D. Hedden, Building Inspector, Long Beach; Geo. Hildreth, Auditor, Vallejo; S. S. Hill, City Trustee, King City; A. E. Hitchcock, City Manager, Santa Rosa; Clifton E. Hickok, City Manager, Alameda; Fred A. Heilbron, Councilman, San Diego; Geo. Holmes, Trustee, Coronado; A. C. Hobart, Councilman, Palo Alto; Frank W. Hodgdon, M. D., Health Officer, Pasadena; Ralph C. Homan, City Attorney, Chino; A. C. Horner, Building Inspector, Stockton; W. W. Hughes, City Engineer, Paso Robles; R. T. Hutchins, City Engineer, El Segundo; M. D. Howlett, Milk Inspector, Los Angeles; T. J. Hoyt, City Trustee, Redondo Beach E. F. Halbert, Trustee, Porterville; G. R. Hayler, Office Engineer, San Diego; Miss Eleanor Hitt, County Librarian, San Diego; W. A. Horn, Councilman, Glendale; Leo G. Haase, Art Concrete Works, Pasadena; R. F. Hammatt, Calif. Redwood Assn., San Francisco; Mrs. G. J. Hall, Sacramento; Fred W. Hatch, Pittsburgh-Des Moines Steel Co., San Francisco; Miss Clarice Haberfelde, Bakersfield; Mrs. Geo. Haberfelde, Bakersfield; Mrs. D. J. Hall, Richmond; L. F. Harturg, Stockland Road Mach. Co., Minneapolis, Minn.; A. T. Hastings, Flee Dorr Co.; Mrs. Wm. Harper, Coronado; Mrs. Vern D. Hedden, Long Beach; Frank R. Henry, Fresno; O. J. Helvey, Street Lighting Spec. Gen. Elec. Co., Los Angeles; E. L. Hildreth, Vallejo; Miss Alice Hildreth, Vallejo; Frank L. Hilton, Water Works Supply Co., Los Angeles; Geo. W. Hill, Jr., Neuner Corporation, Los Angeles; Mrs. Clifton E. Hickok, Alameda; Franklin Hichborn, Santa Clara; Fred S. Hirsch, The Seagrave Co., Los Angeles; Mrs. M. E. Holmes, Coronado; Mrs. Frank W. Hodgdon, Pasadena; Mrs. Ralph C. Homan, Chino; Miss Lillian House, Ocean Park; J. E. Huber, Manteca; Mrs. C. F. Hyatt, Los Angeles; C. F. Hyatt, Bent Concrete Pipe Co., Los Angeles; F. D. Harvery, East San Diego; Geo. H. Herald, American La France Fire Eng. Co., Los Angeles.

Dr. S. Iglick, Health Officer, Orland; Edwin Isensee, Deputy Assessor, Ventura; J. P. Iverson, Chief Cal. Div. Animal Industry, Sacramento; M. H. Irvine, Asst. City Manager, Alhambra; C. B. Ireland, City Engineer, National City; Mrs. Lottie Isensee, Ventura; Mrs. S. Iglick, Orland; Alex. James, Trustee, Fillmore; C. E. Jenkins, Building Official, Alhambra; E. H. Joeliffe, City Attorney, Ontario; Guy P. Jones, State Board of Health, San Francisco; H. L. Johnson, Street Lighting Engineer Southern Calif. Edison Co., Los Angeles; D. M. Jones, Trustee, La Mesa; W. G. Julien, Mgr. Road and Fuel Oil Dept., Los Angeles; C. E. Johnson, City Engineer, San Bernardino; H. W. Jorgensen, Deputy City Engineer, San Diego; W. L. Jencks, Bent Concrete Pipe Co., Los Angeles; Mrs. W. L. Jencks, Los Angeles; J. D. Johnson, Claremont; Lois Johnson, San Bernardino; M. E. Jaffa, University of Calif., Berkeley.

Joseph B. Kahn, Supt. Board of Public Utilities, Alameda; Frank Kasson, City Clerk, Palo Alto; R. W. Kearney, Attorney and Executive Officer Commission of Immigration and Housing of Calif.; Dr. W. H. Kellogg, State Board of Health, Berkeley; H. M. Key, Pres. Board of Trustees, Corona; C. L. Keith, Mayor, Taft; E. M. Keef, Senior Field Veterinarian Calif. Dept. Agriculture, Los Angeles; Harold S. Kiernan, Member of City Council, Sacramento; Charles N. Kirkbride, City Attorney, San Mateo; C. W. Koiner, City Manager, Pasadena; L. Kraemer, Natl. Lbr. Mfrs. Assm., Washington, D. C.; Herbert Koenig, Housing and Sanitation Dept. Health Dept., Los Angeles; W. T. Knowlton, Engr. of Sewer, Los Angeles; Guy L. Kay, M. D., Placentio; H. M. Karr, American LaFrance Fire Eng. Co., San Francisco; Mrs. H. M. Key, Corona; Mrs. C. N. Kirkbride, San Mateo; Bruce C. Kirkbride, San Mateo; Chas. P. Kitts, H. S. Crocker Co., Los Angeles; Roy H. King, Calif. Corrugated Culvert Co., Los Angeles; M. W. Kiff, Calif. Milk Producers Assn.; W. L. King, Salesman, Hersey Mfg. Co., Los Angeles; Mrs. Koiner, Pasadena; H. A. Kuehmsted, Ex-City Manager, Coronado; R. W. Keene, Pac. Coast Mgr. Hersey Mfg. Co., Los Angeles; H. D. Lawhead, Phip. and Health Officer, Woodland; William L. Lane, City Councilman, Richmond; Geo. S. Lewis, City Manager, Tulare; Mrs. C. D. Lewis, City Planning Commissioner, Los Angeles; A. R. Linn, Secretary Board of Trade, Hanford; Frank M. Lorraine, City Manager, Alhambra; L. R. Lathrop, Street Supt., San Bernardino; Dr. Raffaell Lorini, Health Officer, Coronado; John J. Lynch, Čity Clerk, San Jose; Dr. G. L. Lynch, Health Officer Amador County, Amador City; T. P. Lydon, S. F. Dept. of Health, Milk Div., San Francisco; W. F. Laird, Sanitary Inspector for Kern County, Bakersfield; Miss Dorothy Ledyard, Asst. Director Nursing Service Amer. Red Cross, Pacific Div.; Alex. M. Lesem, M. D., Health Officer, San Diego; A. P. Lovell, Supt. of Water, San Diego; Miss M. C. Lawson, Long Beach; Mrs. Lydia D. Lavhead, Woodland; Carl E. Laye, San Francisco; S. C. Legare, Western Wellete Co., San Francisco; Mrs. A. R. Linn, Hanford; Wm. J. Locke, Executive Secretary, San Francisco; Mrs. Wm. J. Locke, San Francisco; Mrs. Wm. J. Locke, San Francisco; Mrs. John J. Lynch, San Jose.

F. B. Meriam, Recorder, National City; Ellen Mathews, Los Angeles County Hath Dept., Los Angeles; Fred L. May, Trustee, Santa Maria; R. G. Manley, City Engineer, Upland; A. A. Mathewson, City Treas, and Tax Collector, Coronado; D. J. Martin, Trustee, East San Diego; Prof. Samuel C. May, Member of City Council, Berkeley; A. A. Maulhardt, M. D., Health Officer of Ventura County, Council, Berkeley, A. A. Mauinardt, M. D., Health Officer, Fresno; H. A. Mason, Sec-Treas, San Francisco; Norman E. Malcolm, City Attorney, Palo Alto; Thos. Mathews, Member of City Council, Marysville; G. W. Meals, City Clerk, Lompoc; August L. Meier, Trustee, Azusa; Thos. H. Meilandt, City Clerk, Ventura; Emmett Mewers, Trustee, Exeter; W. E. Mellinger, City Planning Com, Compton; Dr. C. L. Megowan, Food Inspector, Sacramento; Frank C. Merritt, President, Oakland; Fred C. Mitchell, City Trustee, Redding; Robert Mitchell, Pres. Board of Trustees, Sierra Madre; W. L. Mitchell, Health Officer Orange County; F. Curt Miller, City Engineer, Burbank; H. L. Moody, Auditor and Assessor, San Diego; John A. Morton, City Engineer, Santa Monica; Ray L. Morrow, City Attorney, Glendale; S. B. Morris, Chief Engineer Pasadena Water Dept., Pasadena; Ira D. Moon, Trustee, Azusa; Iack Mohr. Water Supt., Huntington Park; Ernest J. Mott, Official Reporter, San Francisco; Alex Murray, City Trustee, National City; Edwin Mueller, Mayor, El Cajon; F. E. Meah, City Clerk, Upland; Lee F. Meachum, Trustee, El Cajon; Dan B. Martin, H. S. Crocker Co., Los Angeles; Mrs. R. S. Manley, Upland; Mrs. A. A. Maulhardt, Oxnard; Mrs. C. Mathewson, Fresno; Earleen Mathewson, Fresno; Mrs. W. E. Mellinger, Compton; Mrs. C. Megowan, Sacramento; Mrs. Morganstern, Coronado; Mrs. Alex Murray, National City; Mrs. Muther, Pasadena; Mrs. Charles B. Murphy, Glendale; Charles B. Murphy, Tropico Polterie Inc., L. A., Glendale; E. A. Mayerle, Bent Concrete Pipe Co., Los Angeles; Mrs. Robert Mitchell, Sierra Madre; Morton MacComae, Executive Secy. Inglewood Chamber of Commerce, Inglewood; Victor D. McCarthy, City Clerk, El Segundo; H. E. McCormick, Commissioner of Streets, Sunnyvale; Ruth McClintock, City Planning Commissioner, Los Angeles; G. E. McDonald, Health Officer, Long Beach; W. McGinness, Milk Inspector, Fresno; Dr. J. C. McGovern, Health Officer, South San Francisco; J. A. McVettie, City Manager, Richmond; S. W. McNabb, Mayor, San Bernardino; Donald W. MacNair, Milk and Dairy Inspector, San Jose; H. H. McCall, Industrial Testing Laboratory, Los Angeles; J. L. McCurdy, East San Diego; Miss M. McArdle, Sonora; F. McArdle, Sonora; Mrs. H. E. McCormick, Sunnyvale; Mrs. G. E. McDonald, Long Beach; Chas, J. McElroy, Warren Bros. Co., Los Angeles; D. S. McFarland, Neptune Meter Co., Los Angeles; Mrs. W. McGinness, Fresno; Mrs. J. C. McGovern, South San Francisco; A. H. McGovern, South San Francisco; C. T. McGrew, Stockland Road Machy. Co., Minneapolis, Minn.; Frank McDonnell, Redflex Signal Co., Canton, Ohio; Richard J. McDonnell, Reddex Signal Co., Canton, Ohio; Richard J. McDonnell, Reddex Signal Co., Canton, Ohio; Dr. C. S. Noble, City Trustee, Arroyo Grande; E. J. Newbegin, Special Representative; Eureka Fire Hose Dept., Los Angeles; Harry Neel, Jr., City Engineer, Santa Maria; A. J. Newbery, Trustee, Porterville; W. L. Nunes, Housing Inspector, Los Angeles; Allen H. Nye, Neptune Meter Co. (Exhibitors), Los Angeles; Thos. E. Noel, A. Carlisle & Co., San Francisco; C. T. Norfleet, The Pac. Clay Products Inc., Los Angeles.

Frederick Law Olmsted, Landscape Architect, Chairman of Planning Board, Brookline, Mass.; Marie L. Ogborn, Councilwoman, Richmond; Ben Olsen, Second Asst. Health Officer, Palo Alto; Phillip Olsen, Asst. Health Officer, Palo Alto; Louis Olsen, Health Officer, Palo Alto; R. V. Orbison, City Manager, South Pasadena; Herbert F. Ormsby, Bureau of Research and Information—Calif. Dev. Assn., San Francisco; H. F. Orr, City Attorney, Ventura; Thos. R. Ovington, Mayor, Pomona; Bernice A. O'Connell, Deputy City Clerk, East San Diego; Mrs. L. Olsen, Palo Alto; Mrs. R. V. Orbison, South Pasadena; N. C. Olson, Warren Bros. Co., Fresno; B. J. Pardee, City Manager, Visalia; Dr. M. W. Pascoe, Health Officer, Taft; C. A. Paroish, Supt. Water Dept., Compton; Mrs. W. L. Peck, Mayoress, Compton; W. H. Peters, Pres. Board of Trustees, Chula Vista; Morgan J. Peirce, Councilman, Azusa; W. L. Peck, Mayor, Compton; V. Peasgood, Building Supt., Santa Monica; A. E. Pelton, Mayor, San Leandro; Olive Phillips, City Clerk, Colton; Chas. Pivs, M. D., Health

Officer, Yreka; J. H. Plate, City Councilman, Richmond; H. E. Plummer, Inspector of Buildings, Portland, Oregon; J. L. Pomeroy, M. D., County Health Officer, Los Angeles; Edwards W. Porter, Mayor, La Mesa; Hugh R. Pomeroy, Sec. L. A. County — Regional Planning Commission, Los Angeles; James A. Porter, Health Officer, Newport Beach; Harry Polglase, City Clerk, Redondo Beach; H. A. Postlethwaite, City Attorney, Sonoma, San Bruno; C. F. Price, City Manager, San Mateo; W. A. Price, City Clerk, Redwood City; Johnson W. Puterbaugh, City Attorney, Coronado; Wm. L. Popp, City Englineer, San Jose; Walter Parent, Engineering Dept., Bakers-field; Mrs. B. J. Pardee, Visalia; Mrs. M. W. Passoe, Taft; Mrs. Victor V. Peters, San Francisco; Victor V. Peters, San Francisco; Victor V. Peters, A. Carlisle & Co., San Francisco; C. V. Pierce, Santa Maria; Mrs. Hugh R. Pomeroy, Los Angeles; Earl C. Pomed, Imperial Irrigation Dist., Brawley; Mrs. J. L. Pomeroy, Los Angeles.

Chas. F. Richardson, City Clerk, El Cajon; W. F. Rantsma, Deputy Commissioner of Public Works, Fresno; Dr. J. R. Reid, Health Officer, South Pasadena; A. E. Renolds, City Trustee, Auburn; Harry E. Reddick, City Engineer, Santa Paula; C. F. Reeder, Pres. Board of Trustees, Fillmore; Edgar Reed, M. D., City Health Officer, Chino; W. C. Record, City Engineer, Fullerton; Thos. B. Reed, City Attorney, Covina; F. A. Rhodes, Mgr. of Operation, San Diego; E. A. Rolison, City Manager, Redding; Dr. H. F. Roberts, State Dept. Agriculture, San Diego; Frank Roemer, Trustee, Santa Maria; C. F. Rueger, Trustee, El Segundo; Thos. W. Ryan, Pac. Coast Bldg. Officials Conference Ex. Bd., Oakland; G. W. Roberts, Housing and Sanitation Health Dept., Los Angeles; Dr. Arthur M. Rogers, Asst. Health Commissioner, Los Angeles; Dr. Maynard Rosenberger, Supt. Adolu Stock Farms, Los Angeles; Mrs. Harry E. Reddick, Santa Paula; Mrs. Edgar Reed, Chino; Edith H. Reed, Covina; Harry B. Riley, Neuner Corporation, Los Angeles; Mrs. H. B. Riley, Los Angeles; H. H. Roberts, Standard Oil Co., Sacramento; Mrs. F. A. Rolison, Redding; Wm. Stell, Trustee, El Cajon; Chas. N. Shaw, Bureau of Housing and Sanitation, Los Angeles; H. G. Scampini, Trustee, South San Francisco; H. F. Scoville, Secy. City Planning Commission, Monrovia; G. A. Schwabland, City Engineer-San Fernando, Oceanside; W. W. Scott, Mayor, Richmond; Frank A. Scholes, Councilman, Richmond; Lemuel D. Sanderson, City Attorney, Berkeley; H. D. Severance, City Engineer, Monterey; Dr. John J. Sippy, District Health Officer, Stockton; F. A. Silver, Bacteriologist, San Francisco; Wm. Simpson, M. D., Health Officer-Santa Clara County, San Jose; Clyde W. Slater, Mayor, Culver City; Eugene W. Santa Clara County, San Jose; Clyde W. Slater, Mayor, Culver City; Eugene W. Smith, City Clerk and Assessor, San Rafael; Alfred M. Smiley, Trustee, El Segundo; Mrs. Ferd. Snyder, Jr., Town Clerk, Tehachapi; S. H. Spafford, Mayor, Inglewood; Clara Pratt Sparks, M. D., Health Officer and County Phys., Santa Rosa; L. S. Stepp, Councilman, Lemoore; Joseph Strimer, City Trustee, Auburn; G. L. Stock, Trustee, Anaheim; Victor H. Staheli, City Engineer, Redondo Beach; Wim. Stark, Mayor, Anaheim; Victor H. Staheli, City Engineer, Redondo Beach; Wim. Stark, Mayor, Chaheim; Dr. W. L. Stephens, Health Officer, Sutter County; O. E. Steward, City Manager, Anaheim; Frank D. Strimbam, Mayor, Barkeley: A. R. Rus Sauer, E. Pere, Board of Trusteer, Fear St. Stringham, Mayor, Berkeley; A. Ray Sauer, Jr., Pres. Board of Trustees, East San Diego; George F. Sharp, Leg. Com., Fresno; M. Siegel, Housing and Sanitation L. A. Health Department, Los Angeles; L. K. Stoner, Councilman, Bakersfield, B. W. Suratius, Supt. of Streets, National City; F. D. Sweger, Housing and Sanitation Health Dept., Los Angeles; Louis Strahlman, County Health Officer, San Diego; D. W. Stilwell, Treasurer, Bakersfield; C. W. Sirch, Municipal League, Los Angeles; Dr. A. E. Skoonberg, Sanger; Mrs. A. E. Skoonberg, Sanger; Fred Schutzbach, American LaFrance Fire Eng. Co., Los Angeles; Mrs. W. W. Scott, Richmond; Mrs. Frank A. Scholes, Richmond; Mary S. Severance, Monterey; Herbert Shaw, Councilman, Chula Vista; Lee Shirar, Asbestophalt, Oakland; Mr. and Mrs. I. J. Shurte, Cassopolis, Mich.; Mrs. E. W. Smith, San Rafael; Miss Florence Smith, San Rafael; Miss Eugenia Smith, San Rafael; Miss Gretchen Snyder; Mrs. Frank D. Stringham, Berkeley; Mrs. Genevieve Stepp, Lemoore; Mrs. Wm. Stranahan, Fresno; Mrs. Rav Sauer, East San Diego; Mrs. Geo. F. Sharp, Fresno; F. A. Silver, Dairy Delivery Co., San Francisco; Mrs. Clyde W. Slater, Culver City; Alva J. Smith, Engineering, Los Angeles; Chester A. Smith, Burns & McDonnell, Consulting Engineers, Los Angeles;

B. C. Spear, Stuart S. Smith Co., San Francisco; Dr. Elizabeth Sapho, L. A. County

Health Dept., Los Angeles.

C. S. Timmons, City Clerk, Chula Vista; Harry B. Tellyer, District Manager—Bent Concrete Pipe Co., San Diego; G. J. Telfer, State District H. O., Los Angeles; H. Ivar Thomas, City Auditor, Santa Monica; Dr. L. Q. Thompson, Health Officer Butte County, Health Officer City of Gridley; Mrs. F. M. Tidball, City Clerk, Avalon; H. E. Torgensen, M. D. C., Bateriologist and Dairy Insp. S. F. United Milk Co., San Francisco; Oscar Tottleben, Housing and Sanitation, L. A. Health Dept., Los Angeles; B. H. Truax, Chief Fire Dept., South San Francisco; Carl Tremain, Councilman, Stockton; M. Tremble, Deputy City Attorney, San Jose; Ida Trubschenck, Clerk, Sunnyvale; Harry Tshoppe, City Engineer, Calipatria; W. Tupper, City Planning, Assn. of L. A., Los Angeles; Harold A. Taylor, Pres. City Planning, Coronado; Harry L. Titus, City Recorder, Coronado; A. M. Tobias, Mayor, Porterville; Chas. H. Traber, M. D., Health Officer, Reedley; Mrs. Harold A. Taylor, Coronado; A. Tocque, East San Diego; Marjorie Traber Reedley; Mrs. C. Trubschenck, Sunny-

vale; E. C. Upp, City Clerk, La Mesa.

W. E. Varcoe, City Clerk, Alameda; R. D. Van Alstine, City Engineer, Long Beach; William Veit, V. M. D., City Veterinarian, Los Angeles, Arthur C. Veit,; Building Official, Alhambra; R. B. Van Dusen, Deputy City Marshall, Culver City, V. Van Riper, City Clerk and Auditor, Bakersfield; A. J. Van Wie, City Clerk, Glendale; Mrs. R. D. Van Alstine, Long Beach; A. Van Vechten, Stephen, Smith & Co.; Master Dale Van Riper, Bakersfield; Mrs. V. Van Riper, Bakersfield; Mrs. Van Dusen, Culver City; J. O. Wanzer, City Manager, Marysville; H. C. Waughon, City Clerk, Long Beach; W. A. Walden, Mayor, Gridley; Howard Walton, City Engineer, San Marino; L. J. C. Wegner, City Trustee, Merced; Wm. B. Wells, Health Officer, Riverside; Mrs. Ida K. Welbone, City Clerk, Paso Robles; R. J. Wheeler, Milk Inspector, Los Angeles; W. S. White, City Attorney, Salinas; C. F. Whitney, Health Officer, Colton; Fred C. Wheeler, Councilman, Los Angeles; G. Gordon Whitnall, City Planning Director, Los Angeles; W. A. White, City Clerk, Orange; Sherman T. White, M. D., County Health Officer, Redding; T. M. Wilzinski, City Attorney, Sonora; P. R. Wightman, Pres. Board, Sunnyvale; Dr. C. H. Wilson, D. C., Health Officer, South Gate City; Chas. C. Wing, Dairy Inspector, Oakland; L. Wierda, Bldg. Dept., Richmond; F. P. Wilcox, Field Veterinarian—Dept. of Agriculture, Los Angeles; Harry K. Weitzel, Councilman, San Diego; Clyde Woodworth, City Attorney-Inglewood and El Segundo; Boyle Workman, Pres. City Council, Los Angeles; Geo. H. Wood, Controller of Accounts, Pasadena; M. C. Woodruff, Pres. Pac. Coast Bldg. Official Conference, San Jose; Allen H. Wright, Past President, San Diego; N. E. Wretman, City Attorney, Sunnyvale; H. F. Wegnori, Chief Building Inspector, San Bernardino; W. R. Wright, City Clerk, Huntington Beach; Mrs. H. C. Waughop, Long Beach; Betty Waughop, Long Beach; Mrs. Howard Walton, San Marino; Mrs. W. B. Wells, Riverside; Alex Webster, City Attorney, Paso Robles; Mrs. W. A. White, Orange; C. M. Wheeler, Willite Paving Co., San Diego; Mrs. C. M. Wilzinski, Sonora; Miss Dorothy Winters, National City; Mrs. C. Winters, National City; C. Winters, National City; Lois Webster, Paso Robles; Blanche H. Webster, Sonora; J. C. Webster, Trustee, Sonora; Miss Workman, Los Angeles; Mrs. Boyle Workman, Los Angeles; Mrs. Clyde Woodworth, Inglewood; Miss Ruby Wood; Mrs. E. Wheeler, Pioneer Society, San Diego; R. W. Whitaker, Portland Cement Assn., San Diego; Mrs. A. B. Wood, San Diego; Margaret Webster, Paso Robles; Frances M. Harmon Zahn, Board of Directors, L. A. Public Library, Los Angeles; Harold A. Young, Health Officer, El Segundo; J. C. Young, M. D., Health Officer, La Mesa; Otto J. Zahn, L. A. City Planning Assn., Los Angeles. Total registration, 675. Cities represented, 120.





Twenty-fifth Annual Convention

of the

LEAGUE OF CALIFORNIA MUNICIPALITIES

at

HOTEL del CORONADO :: CORONADO, CALIF.

The Convention was opened by community singing, led by Mr. Wallace Moody, of Coronado.

OPENING ADDRESS BY FRANK C. MERRITT
PRESIDENT OF THE LEAGUE

Ladies and Gentlemen of the League of California Municipalities: In opening this 25th Annual Convention of the League of California Municipalities, it should be called to the attention of the delegates that our organization has reached a prominent position in the affairs of the State of California. It has steadily advanced during its quarter century of existence and is now recognized throughout the United States as an institution of proficiency and accomplishment, setting a mark to be followed by similar leagues of other states.

It is freely admitted that the formation and development of municipal communities has been a primary factor in the march of civilization, and while the state and nation must of necessity rely upon rural territory for its very existence, the city is nevertheless the pivot of commercial, industrial, and intellectual activities and serves not only those contained within its boundaries, but also the great body which is tributary and adjacent. Its problems and achievements are of tremendous importance: and while there are many distinctions, in general the cities' problems similar and public administration can best be advanced by the open and free discussion of facts, experience and ideas for improvement between those who are trained or desire to improve their knowledge of the affairs of city government. The need of this intercourse perhaps may be the reason for the existence and continued success of the League of California Municipalities. There is a fascination in public service and it may well be said to the credit of many of our officials, particularly those of the cities, that the continued service as a municipal official instills a spirit of devotion to continued advancement and upbuilding of the community.

We come here delegated by our different communities to bring home if possible the solution of varied problems or to gather ideas for improvements that will be of benefit to the particular vicinity in which we live, and it behove us all to feel that it is our public duty to give as well as to receive. If you seek knowledge you should feel free to ask; and if you have something good, be generous and impart it to those assembled here ready to receive it.

Let there be during the convention a spirit of comradeship and earnestness for the advancement of our different communities and the success of the League and I am sure that, with these thoughts in mind, our result will be most successful, and with a better understanding obtained, we will return to our own cities better officials.

We have an interesting program, and it is desired that close attention be given to all speakers. In addition to attendance at the meetings of the general body, delegates are particularly urged to attend all meetings of their respective departments. We believe that sufficient time has been allotted to fully complete our program, but it may be found necessary to rearrange our schedule. Delegates should not be reticent in

suggesting any changes which will facilitate our work or be of material benefit.

It is particularly urged that all meetings be called to order promptly at the time scheduled, and let us all bear in mind that "an ounce of ideas is worth a pound of words."

I shall make no formal report of the activities of the League during the past year, though I assure you it has been a busy one. The Secretaries will present the required data. Let us begin at once with the business before us.

It gives me great pleasure at this time to call upon Mayor Wm. E. Harper of Coronado, who will say a few words of welcome to you on behalf of this beautiful city (applause).

ADDRESS OF WELCOME TO CORONADO By WILLIAM E. HARPER, Mayor of Coronado.

President and Ladies and Gentlemen: While some will tell you that times have changed, since that time before the moisture was extracted from hospitality, it is not so of Coronado's spirit. Nothing could dampen the ardor of our perennial hospitality here. We offer you Coronado, ask you to help yourselves, and we will be very sure that if you are as glad to be here as we are to have you here, you will accept in the same spirit. Coronado speaks for itself,

and it is not needful that I should make a long speech for it.

I know you are all waiting eagerly, as am I, for the bottled-up wisdom that is to be poured out upon us by those who have come to take part in the Convention program, and as "brevity is the soul of wit," I will conclude by saying to you that we want you to make yourselves at home and stay as long as you can (applause).

RESPONSE TO THE ADDRESS OF WELCOME By Samuel C. Evans, Mayor of Riverside.

Mr. President and Ladies and Gentlemen: For about twenty years I have attended nearly all of the meetings of this League, and I know I have been impressed with the fact that each place to which we go gives us the best Convention we have ever had. The different cities in which we meet seem to vie with each other in having something unique and interesting. I feel sure,

however, Mayor Harper, that we must take off our hats to Coronado, because what other city could provide a total eclipse of the sun and such a magnificent pageant as we were privileged to witness out there at the polo field this morning. I, too, shall be brief. It is said that the American people are not artistic in temperament. I have heard artists make that remark, but I know that out there

to-day it appealed to me personally as an exceedingly artistic, well-staged and well-acted pageant, and the sun provided the piece de resistance. We crainly had a wonderful illustration of the power and the majesty of the ruler of this universe. It was a very good setting, one by which we can always remember Coronado.

And now, Mr. Mayor of Coronado, I understand that your name is Harper. When you go up above, you will certainly be entitled to the biggest harp that you can find, and to be the champion harpist of the universe (applause).

Report of the Executive Secretary

In the course of their long and tedious journey to this western land, it was customary for the hardy pioneers to pause occasionally and look back on the long trail they had left behind, that by reviewing the many obstacles already overcome they might be inspired with fresh vigor and determination for encountering those which they were yet to meet. And so, in the course of the progress of the various institutions founded by man, it is advisable that the active participants therein take pause occasionally, and look back on the pathway over which they came, that by so doing they may take fresh courage and face the future with renewed hope and confidence.

The institution under whose auspices we are assembled here to-day has reached a prominent milestone in the pathway of its progress and, pausing for a moment to review our steps, we are able to look back upon a long story of achievement. Twenty-five years ago the government of our municipalities was referred to as a conspicuous failureone that constituted a serious menace to the future of this great republic. It was that condition which prompted the organization of municipal leagues and such institutions, so that city officials and others interested in securing better municipal government might get together in annual conference and exchange their ideas and experiences. Prior to the formation of these organizations, city officials were compelled to grope in the dark, so to speak, and municipal improvements were largely a matter of experiment; but the state leagues and especially their annual conferences served as a clearing house, and enabled the officials thenceforth to be guided by the lamp of experience.

A citizen of the United States living within the confines of a municipality comes under the jurisdiction of four different kinds of government; first, that of the nation; next, that of the state; third, that of the county; and last, that of the city in which he lives. Should you ask the average citizen which of these four kinds of government most directly concerns his general welfare, he would probably answer by giving that credit to the national government. A little reflection, however, would convince him of his error and satisfy him that, except in time of war, that branch of government which most directly affects his interests is that of the city or town in which he has his home. For example, the ratification of treaties or the enactment of tariff laws will not be likely to concern him nearly as much as the passage of a zoning ordinance or the improvement of his street. This is evidenced by the attitude of the press which, presumably, reflects public interest. Only a small amount of space is devoted to congressional matters as compared with that which is accorded to the local city council and its doings. However, municipal government is important for the influence it has on other political sub-divisions of the state. History shows that the quality of government is reflected upward, and that better government in our cities means better government in the state and in the nation. Conceding, therefore, the importance of municipal government. it naturally follows that we must concede the equal or greater importance of maintaining and improving those institutions which have been responsible for bringing about better municipal government.

We are frequently told that the private corporation is far more efficiently managed than the public corporation. A Coronado gentleman who labored under that impression was recently arguing the matter with a San Diego man who held the opposite view. The San Diego man contended that the government and management of a municipality was far more efficient than any private corporation. Addressing the Coronado man he said, "Now then, by way of illustration, take your club. You had to pay \$250 to join and it costs about \$250 per year for expenses. What do you get out of it in the way of benefits?" "Well," said the Coronado man, "I have the privilege of taking my family and friends to the clubhouse, playing golf, meeting desirable people, and having good times socially." "So much for that," said the San Diego man. "Now, what do you pay in city taxes?" "About \$60.00 a year," was the reply. "And for that small amount in taxes," said the San Diego man, "you get police and fire protection, sewers, a health department to protect yourself and family from disease, finely paved streets, parks and playgrounds, street lights, and many other conveniences which make life worth living. Do you still think your private club is a more efficient organization than your city government?" "Oh, I never thought of it that way," was the reply.

It has been my honored privilege to serve as the executive officer of this league for the past fifteen years, during which period it has grown in membership from one hundred to two hundred and forty municipalities. Among the other state leagues ours occupies an enviable position. In 1914 the National Municipal League declared it to be the best of its kind in America, submitting a report thereon reading as follows:

"Two years ago a special committee of the National Municipal League gathered the reports of all the leagues of municipalities, conferences of mayors and similar organizations, and also various information regarding the activities and histories of these organizations.

"It was the opinion of the committee that the best and most effective league was the California League of Municipalities, and that it constituted the highest development of such organizations yet seen in the United States."

Reliable information from sources equally responsible is to the effect that we still hold the position which we were accorded in 1914.

However, we cannot afford to stand still and rest upon our laurels. Many things can be done for improving the present service of the league and increasing the benefits of membership. For example, our library of ordinances requires enlargement; more legal forms are constantly being called for; a new and more elaborate edition of the handbook has been requested; and there is a constant demand for model building codes and tax ordinances. To comply with these various requirements would necessitate a larger budget and a slight increase in dues. Nevertheless, I am of the opinion that this should be done. At the present time we are working on too close a margin. Moreover, our interests at the state capitol have suffered because of insufficient funds. It is too much to expect the members of our legislative committee to pay their own expenses at Sacramento as they have been required to do in the past. The present annual income of the league is approximately \$5,500.00, and it has been suggested that the dues be increased so as to provide an income of about \$7,500.00, and thus enable an increase in our budget for the following purposes:

Increased rent \$ 400.00 Stenographer and multograph work 1,200.00 Legislative committee 250.00 Increased stationery and postage 250.00

The League of California Municipalities has never participated in "politics" as that term is generally understood. It is not a political organization, and its influence never has been. and I trust never will be, used to promote the candidacy of any individual or political party. Any departure from that policy would be a serious mistake and undoubtedly be fraught with disastrous consequences. Nevertheless, the very nature of our organization makes it necessary that we take an active interest in public affairs insofar as they concern the future welfare and prosperity of our municipalities, and one of the principal functions of the league is to try to secure benevolent legislation for our cities and towns and prevent the adoption of measures inimicable to their interests. Our past efforts in this work have been

far from satisfactory, and this fact is particularly true with respect to the last legislature. The pleas of our legislative committee for some participation in the Motor Vehicle Fund have been treated with contempt. Time and time again our cities have been asked to vote bonds for state and county highway systems, only to find their construction thereafter stopped at the city limits. It is the old story of taxation without representation. One of the many objectionable laws passed by the last legislature makes it almost an impossibility to incorporate a new municipality. Another one relating to the deposit of public money, prevents any city or town from placing more than one-fifth of its funds in any one bank; the same law authorizes the bonds of a surety company to be deposited as security for public funds.

There is only one effective remedy for the situation which now confronts the cities and towns of this state. If the municipalities want good laws, they must first secure good men and women to make them, and you cannot secure good men and women for that purpose by simply wishing for them. Somebody must induce them to run. The private corporations now see to it that they are properly represented for the protection of their private interests. Is there any reason why the public corporations should not likewise be represented for

By way of conclusion, I will take the opportunity of submitting another testimonial of the present standing of our organization. About a year ago the National Municipal League employed Professor Samuel C. May, now of the University of California, to make a comparative study of the work of the various state leagues. Mr. May's report, in part, reads as follows:

"During the last two years it has been my good fortune to come into contact

PACIFIC MUNICIPALITIES

with a number of the leagues existing in other states, and I therefore feel that in making a statement in regard to the California league I have some basis for comparison.

"The Iowa league is larger in membership, but the California league is second on the list. I have attended conventions of only two other leagues, but from what I have heard, I believe that the conventions of the California league are the most successful in this country. Our Bureau of Public Administration has copies of the monthly publications of other leagues and again your publica-

tion, in my opinion, is at least equal in content and far more attractive in form than any of the others. On the whole, I consider the California League of Municipalities equal to any in America, in the success of its conventions, its publication and the interest of its members."

Let us hope that the league may long retain the position of prestige and leadership which it has held for the past ten vears.

Respectfully submitted, WM. I. LOCKE. Executive Secretary.

REPORT OF THE SECRETARY-TREASURER

H. A. MASON, San Francisco,

Mr. President and Members of the League: My report will be divided into two parts, a formal financial report, and an informal report on other matters. They will be equally brief. The formal part covers our financial situation from September 10, 1922 to September 10, 1923, and is as follows:

FINANCIAL STATEMENT

For the twelve months from September 10, 1922 to September 10, 1923:

10, 1922

RECEIPTS Balance Cash on hand, Sept. \$ 972.10

Received from Dues	5,135.00
Paid by A. Carlisle & Co. a/c	
Magazine	735.00
Advertising	32.50
Half-tones paid for	14.60
Warrant Canceled	2.60

Total Receipts	\$6,891.80	
Total Disbursements	5,889.22	

September	10,	1923,	Balance		
Cash on	Hand		\$1,	002.5	8

THE EXPENDITURES WERE DISTRIBUTED AS FOLLOWS:

Salaries	\$3,000.00
Clerical	1,219.05
Rent	480.00
Postage	202.11
Convention Expenses	261.50
Telegraph and Telephone.	145.63
Stationery and Printing	310.96
Furniture, Books, etc	120.64
Publicity	116.23
Dues	. 18.00
Miscellaneous	15.10

As to the item of expense "Publicity," that is what it cost this League to defeat three constitutional amendments, dealing with or affecting municipalities. You will remember what they werewe discussed them at the Palo Alto Convention. Figured on the basis of how much per amendment, it amounts to less than \$40.00, whereas other organizations spent as high as \$500,000 to defeat a single amendment, showing

\$5,889.22

the superiority of public over private

As a matter of informal report, I want to say this: It was just twenty-five years ago this month, sometime about the 6th day of the month, that I sent out the first circular letters to the city officials of the State of California, asking their advice as to whether or not it might not be a good idea to get together and form an association of this kind. I won't deal with the results-von know what they are. There is a time in the life of a man when he is said to reach the "Don't you remember when?" age. It has come to some of us, but has not quite reached me, and, therefore, I am not going to indulge in any reminiscences. I could recite a great many that might be interesting, yet they would not be accompanied with any particular profit.

But I want to say that, in the course of twenty-five years of life devoted to public service, there have been impressed upon me two great facts. The first is that the way of public service is a very straight and narrow way. It is beset with temptations on every side, and he who travels it must watch his step and tread that way firmly, without hesitancy, with an eye singly ahead. He must not look sidewise, lest he make a misstep, and when he goes, he goes forever.

I have watched the careers of thousands of men. Nearly every man who has served in California during the past twenty-five years, I have known, either personally or by his work. There are some who are still in the service, and their names are respected and honored. Others have been advanced to high places, and their names are respected and honored. Still others have served as best they could and dropped out. There are a few who have made missteps, and they have been forgotten, as they should be.

The lesson of it is this: That we who

serve the public must watch our step. We must be careful not to listen to temptation. We must have our eyes solely on the public good. We must not falter or hesitate, we must not sidestep.

The other great fact is this: That the compensation for what we do, for this service that we render, is always ample. It is not measured in dollars and cents. In my own case, the money that has come to me as the result of my service is not the compensation that I feel within myself. You who have served will appreciate that feeling. You know that there comes to every man who performs a public act, who renders a public service, a feeling and a consciousness that somehow somebody is going to be benefited, and that feeling, that consciousness, is itself compensation. The knowledge that what you have done and what you purpose doing, will benefit, not alone individuals here to-day, but will be carried on down, and the end will perhaps never be reached (as the act we perform to-day lives after us) the service we render to-day is for all time: hence the knowledge and the consciousness of having performed something for the public benefit, and having performed it conscientiously and faithfully, is the greatest compensation that a man can receive for his work.

Those two facts have been brought home to me after twenty-five years of service, and they will come home to you, if they have not already done so.

On motion of Mr. Peck of Long Beach, seconded by Mr. Woods of Long Beach, the Pacific Coast of Building Officials was invited to hold its meeting in connection with the Convention of the League of California Municipalities, and to become a part of that Convention in each session.

Amendments to the Constitution of the League Adopted at Coronado Sept. 13th, 1923

AMENDMENT No. 1.

Strike out the first paragraph of Section IV and substitute in lieu thereof the following:

"The officers of the League shall consist of a President, a Secretary-Treasurer and an Executive Secretary. They shall be elected at each annual meeting and hold their respective offices until the following annual meeting and until their successors are duly elected. The president will preside at all meetings of the League in assemblages of the entire body. In case of his death or other disability the executive committee shall appoint a successor for the unexpired term. This provision shall not go into full force and effect until the annual meeting of 1924; in the meantime no second vice-president shall be nominated at the 1923 meeting and no vice-president whatever at the 1924 meeting."

AMENDMENT No. 2.

Add to Section III the following:

"As soon as possible after convening, each of the four departments shall choose one of its members to serve on the nominating committee, preferably one who is familiar with the work of the League. The four members shall choose another to make a fifth member of the nominating committee. Said committee shall nominate and report the names of either one or two persons for each office to be filled; provided that before proceeding with the election the president shall invite additional nominations from the floor. The election, except where there is but one nominee for the office, shall be by secret ballot. Each municipality shall have one vote, and a plurality vote shall elect."

AMENDMENT No. 3.1

Add to that portion of Section IV relating to the duties of the Executive Secretary, the following:

"Prior to each annual Convention the Executive Secretary shall send out to the city officials a questionnaire ballot containing the titles of subjects for the program and requesting the officials to mark thereon their first, second and third choices and return them to League headquarters. So far as practicable, the program shall be prepared according to the returns thus received.

"The Executive Secretary shall present an annual report on the progress of the League and suggestions for its improvement. He shall also submit a budget showing the financial necessities for the coming year."

AMENDMENT No. 4.

Strike out Section II and substitute in lieu thereof the following:

"Any incorporated municipality in the State of California may become a member of the League upon payment in advance of the annual dues as follows: For cities having a population of less than 1,000, \$15.00; between 1,000 and 3,000, \$30.00; between 3,000 and 10,000, \$40.00; between 10,000 and 30,000, \$50.00; between 30,000 and 150,000, \$60.00; for more than 150,000, \$70.00."

The population shall be based on the decennial census report of the United States, next preceding the date of taking out membership.

The incorporated cities and towns of other States and Territories may become members of the League upon the payment of dues based on one-half of the scale aforementioned.

Counties, municipal utility districts, public utility districts, and other political sub-divisions of the State may become members upon the payment of dues in the amount of twenty-five (25) dollars per year, payable in advance.

THE FOLLOWING RESOLUTIONS WERE, ON MOTION, ADOPTED SERATIM:

PUBLIC HEALTH NURSES ASSOCIATION

"WHEREAS, the organic life of the Public Health Nurses Association is very closely allied to the functions of the Health Officers' section of the League of California Municipalities and

"WHEREAS, the aims and purposes of both are along parallel lines, therefore be it resolved that the League of California Municipalities does hereby extend to the Public Health Nurses Association a most cordial invitation to meet jointly annually at the same time and place as the Health Officers' section of the League of California Municipalities meets."

DEPOSIT OF PUBLIC FUNDS

"WHEREAS, the last session of the Legislature of the State of California enacted a law entitled 'An Act to authorize and control the those in manks of money belonging to the those in the control of the control of the within this state, and to repeat all acts or parts of acts in conflict with this act, approved April 12, 1923, and

April 12, 1923, and
"WHEREAS, the said law places upon the
Municipalities of the State of California, new
and radical restrictions in the matter of the

deposit of their funds, and

"WHEREAS, the said restrictions are deemed needless and burdensome and inimical to the best interest of the Municipalities of the State—

"NOW, THEREFORE, BE IT RESOLVED by the League of California Municipalities in its 25th annual convention assembled, that the said law be disapproved and that the immediate repeal thereof be earnestly recommended."

BOULDER DAM PROJECT

"WHEREAS, one of the greatest undeveloped assets of the United States is the Colorado River, and

"WHEREAS, this mighty stream is wasting approximately 15,000,000 acre feet of water annually into the Gulf of California, which water is a menace to life and property while it runs to waste and

"WHEREAS, if this water were conserved it would be sufficient to irrigate approxi-

mately 3,000,000 acres of land in Arizona, California and Nevada, and

"WHEREAS, in addition to irrigating this year area of now worthless desert land the area of the fifteen million are feet of the fifteen million are feet of the fifteen million will furnish six hundred thousand horse-power of electric energy, sufficient to turn every wheel of industry within a radius of 600 miles of the generating plants, and

"WHEREAS, the annual flood waters of the Colorado River constitute a standing and ever increasing menace to Imperial Valley and other Lower Colorado River Valleys, jeopardizing over half a billion dollars' worth

of property, and

"WHEREAS, there is now pending in Congress the so-called Swing-Johnson bill, designed to construct a storage and flood-control dam at or near Boulder Canyon in the Grand Canyon of the Colorado River, which will store one-and-a-half year's run-off of the Colorado River, thereby making Imperial Valley, Yuma Valley, and all other valley lands below said dam, immune from overflow from the Colorado River, and

"WHEREAS, the Swing-Johnson bill also provides for the construction of the All-American Canal, through which an additional half million acres of the matchless lands of the great Imperial Valley will be brought under rirgation, adding an additional half billion dollars of taxable wealth to the State of California, and

"WHEREAS, about 200,000 acres of this new area will be thrown open to 'homestead entry', giving our World War soldiers and veterans of our other victorious wars a preference right to file on these lands, therefore be it

"RESOLVED, by the League of California Municipalities in annual convention assembled, that we hereby endorse the Swing-Johnson bill in principle, and urge Congress to immediately authorize the beginning of the work that is so essential to this proposed development of the Lower Colorado River Basin."

LEGISLATIVE COMMITTEE

"WHEREAS, more than one-half of the people of California live in its incorporated cities and towns, who are, for this reason directly interested in proper and effective municipal legislation for and on behalf of the municipalities of the State of California; and

"WHEREAS, it appears to be necessary and towns of the State of California to co-operate for the purpose of receiving proper recognition and consideration before the Legislature of the State of California in order to enact efficient laws relating to the municipal affairs thereof:

"NOW, THEREFORE, BE IT RESOLVED by the Twenty-fifth Annual Convention of the League of California Municipalities, in order to carry out the objects and purposes set forth in the above preamble to this resolu-tion, that a General Legislative Committee at Large on Municipal Legislation be and the same is hereby created, the members of said committee to consist of the Mayor or President of the Board of Town Trustees, as the case may be, of each city and town respectively belonging to this League, and said Mayors and Presidents are hereby appointed as the members of said General Legislative Committee, for the purpose and to the end of co-operating with the regular Legislative Committee of the California League of Municipalities, to secure proper, necessary and beneficial municipal legislation; and that said General Legislative Committee of this League and the Mayors or Presidents of the Board of Town Trustees of the several cities and towns of the State of California, as the case may be, belonging to this League, be called in convention by the President of this League, at some convenient place, to work out and devise a plan for securing such legislation, and to adopt rules and regulations for the carrying out of the plan so devised, in order that the legislation proposed by the cities and towns comprising this League be enacted into laws by the Legislature of the State of California.

RESOLUTIONS OF THANKS

"RESOLVED, by the League of California Municipalities that this organization appreciates the courtesies extended to it at this its 25th annual convention, and that it extends its thanks especially to the County League of City Officials for the many services rendered, and also to the press for the publicity given the proceedings of the Convention, and also to the Hotel del Coronado for the facilities, conveniences and delightful setting afforded the convention for its deliberations."

Upon motion, after the reading of the following resolution, presented by the Department of Clerks, Auditors and Assessors, that it be spread upon the minutes of the Convention, but be not formally adopted, for the reason that it is a matter that should be left to the discretion of Boards of Trustees and City Councils of the Municipalities of the State:

"RESOLVED, that the Clerks, Auditors and Assessors vection of the League of California Municipalities in regular session assembled this 12th day of September, 1923, do hereby draw the attention of governing bodies of all municipalities, members of the League, to the fact that said officers are greatly insentited by an occasional interchange of ideas and experiences, as attested to by several city clerks at this meeting, and are thus enabled to display greater efficiency and render a more comprehensive service to their constituency, expenses of such attendance thereby creating an asset rather than a liability in view of which

"BE IT FURTHER RESOLVED, that the said section of Clerks, Auditors and Assessors do hereby earnestly urge all City Councils and Boards of Trustees of California Municipalities to send the City Clerk, Assessor and Auditor of their respective cities to future conventions of the League of California, and to arrange in their budgets for the necessary expenses of such officers so attending such conventions."

The following resume of the activities of the Health Officers' Section of the League was summarized by the Executive Secretary, and upon motion, ordered to be published in "The Pacific Municipalities" for the information of city officials generally:

"Coronado, California, September 13th, 1923. "To the President and Members of the League of California Municipalities:

"The Health Officers Section of the League presents for your consideration a brief resume of the activities of this session just come to a

"Attendance: There have been over one hundred registered in the session and each session has been well attended by delegates present from as far North as Yreka

"Pacific Coast Conference: Through the efforts of this section there has been organized a Pacific Coast Public Health Association composed of representatives from the States of California, Oregon, Washington, Idaho and Nevada, together with the territory of Hawaii and the province of British Columbia. The object of this Association is to further the standardization of laws, rules and regulations pertaining to the public health.

"For the furtherance of this most important matter a conference will be held annually and five delegates will be elected from the Health Officers' Association of each State. This section represents and is the body to send delegates to California.

"The Health Officers' Section desires to bring to your attention some of the more important subjects which have been under discussion during its session.

"Camp Ground Sanitation: Camps and camp grounds are increasing tremendously both in size and number due to greater facilities for transportation and the sanitation of these

constitutes a serious problem. The adoption and enforcement of proper rules and regulations governing these institutions is necessary to prevent the spread of communicable disease.

"Rabies: It has been clearly demonstrated that rabies is rapidly on the increase and con-stitutes a serious menace in California to-day. The only effective and humane method of control at present is by vaccination of all dogs with anti-rabic virus and the prompt destruction of all stray dogs. If vaccination is not feasible then a strict enforcement of muzzling

laws becomes necessary.

"Diphtheria: For the better control and prevention of diphtheria a universal application of the Schick test and immunization of non-immunes by Toxi-Antitoxin is advocated. These measures have now been developed to a point where there is no danger to life or health on their application. "County Health Units: In the State during

the past year there have been established several County Public Health Units which provide full time Health Departments for rural districts as well as incorporated cities. These are proving their worth in increasing measure. The cordial support of this most measure. The cordinal support of this most modern, up-to-date and long needed public health utility is requested by this section.

"Malaria: The further development of mos-

quito abatement districts throughout the State is urged. Since it is an established fact that the only means by which malaria is propagated is by the mosquito, the destruction of this pest will result in the complete eradication of the disease."

Election of officers for ensuing year being declared in order, the following were elected:

President: Major Charles N. Kirkbride of San Mateo. Vice-President: Norman E. Malcolm of Palo Alto. Executive Secretary: William J. Locke of Alameda. Secretary-Treasurer: H. A. Mason of San Francisco.

Address of President-Elect Charles N. Kirkbride

Mr. President, I presume I need not say to the members of the Convention that the selection of myself for President came at a time when I happened to be in San Diego on a business matter, and that it was something that I knew nothing of.

As I look back over the history of the League of California Municipalities, I am carried with particular force to the first President of the organization, our then Mayor, since Senator, Phelan, a man who was not afraid to face the necessities of an attempt to give us good government in the City of San Francisco, and who did give us good government during his administration of that office, and, incidentally, gave us the charter, which at the time it was adopted, was way ahead of anything in the form of fundamental government of our large cities, although perhaps not up to the progress of the present day. This institution was born in Mayor Phelan's day and has grown, and I feel sure that I may say without contradiction that the League has done a wonderful work.

It has been my good fortune to attend all of the conventions of the League of California Municipalities but one, and at that time I was at home incapacitated, and I shall certainly continue to attend them as long as I am a public official. Indeed, I have to attend their conventions. It isn't a question of whether the City Council wants me to do so or not; I have to do it in order to properly perform my duty as a city official, and in order that I may in a measure keep abreast of the times and keep abreast of the problems that face us. Some of those problems are old. Some of the questions that we are now discussing were discussed years and years ago. But the surprise to an old city official is that every convention brings up something new, indeed, many things. Every time we have a session, some new problem comes up that we did not know about before. So it is that I, for one, am willing to testify at this little testimonial session, that I have had to attend the conventions of the League in order, in a measure, to keep up to date. I sincerely thank you for the great

On motion of Mr. Hall of Richmond, a

standing vote of thanks was extended to retiring President Frank C. Merritt, for the able and impartial manner in which he had performed the duties of his office during the year, and presided over the deliberations of the Convention.

The Convention then adjourned.

ASBESTOPHALT PAVEMENT

By August E. Schutte,

Before the Department of Engineers, Councilmen, and Street Superintendents at Coronado.

It is the invariable custom of any one who considers the subject of roadways or pavements to commence with the old Roman roads or at least with a reference to the Conquest of Peru, and without fail, to Macadam. No doubt you all have had these matters referred to ad nauseam and are tired of hearing what Macadam did, what the French engineers did after him, and how the now dead Macadam pavement had been gradually developed.

Since all development and all understanding is based upon a prior experience and since truth has a great many different aspects, each perhaps leading us through a different train of thought, I will have to, per necessity, go back as far as Macadam in order to trace the development and logical sequences of the subject matter I am to speak about.

John Macadam found that continuity and uniformity of a road surface could only be achieved by breaking stones to a uniform one-grade size, placing them on a roadbed and allowing traffic—horse and donkey traffic in those days—to compact and consolidate. This compaction and consolidation depended upon, and was the result of, attrition. A load travelling over the loosely placed stones of "the size of a walnut," would displace the stones, causing some of

them to crack or at least the breaking off of small corners which sifted into the spaces between the larger ones and gradually keyed them, holding them immovable and then, during the next stage, filling the voids and spaces and producing a continuous surface. do this took a very long time and a new macadam road of that day was far from a pleasant one to ride on. It was, however, a tremendous improvement over the dirt roads of that day with their hub-deep mud holes. In a Macadam road thus built the state of perfection and the commencement of deterioration were separated only by a short space of time; for as soon as the drainage, upon which Macadam put so much stress, and which was to be through the surface metal, was stopped through the working in of the finer particles, the road would commence to wash and the well known commencement of the end set in.

The French engineers, and some of the English ones, decided that the waiting for traffic to consolidate the pavement was a tedious and expensive one and concluded, and so proved by experiments, that immediate good results could be achieved by "blinding" the surface—a method which Macadam himself, in later years, adopted. This "blinding" was a filling of the superficial

voids and was a great improvement, as it not only produced a good wearing surface at once, but also it prevented to a great extent the movement of the particles and extended the life of the roadway, and furthermore through the immobility of the stone-layer retained the drainage. The main body of the pavement thus really became a foundation and support for the thin fine layer.

Roadways were built thus for many years with but few changes. Prominent highway engineers, as for instance the engineers of Massachusetts, made improvements in this construction by using large stones up to 2½ inches for the first layer, smaller stones about ¾ inch to fill the voids and spaces, superficially, in the big ones, and then "blinding" the whole mass with crusher screening, washed in, as far as possible, with water, thus producing a water-bound macadam.

We all know that with the passing of the horse and the advent of the automobile, water-bound macadam became an impossibility. It might be of interest for a minute to consider why a vehicle having soft rubber tires should be more destructive to a roadway than the hard beating of horses' shoes and the grinding of steel tires. This is, of course, due to a certain extent, but in a rather minor way, to the comparative speed of the two vehicles; and at first thought one would contribute it entirely to this. It is due, in my opinion, to the fact that, in the case of the automobile, the origin of momentum and the force incident thereto are generated at the point of greatest stress, while in a horsedrawn vehicle this stress is divided. The load with its pressure is upon the wagon, while the horse pulling against it is at a different spot, so that the stress is divided; while, in the case of the machine, the whole weight is at the very spot where the momentum is generated. Furthermore, in the case of a

rubber tire, there is a double destructive movement in the collapsing of the rubber tire, which forces all particles to right and left of the tire, and a sudden recovery of the tire which draws these particles back to a point coinciding with a line drawn through the middle of the tire. Particles which are loosened by this double action are then whirled back by centrifugal force. This is entirely different from the action of a horse-drawn vehicle, where the tires simply have a compressive action.

An illustration of the difference between the action of the automobile and that of the wagon, eliminating the effect of the tire, can be noticed somewhat in the action of the ordinary road roller while compressing pavements. The front wheels of the roller will usually push the material in front in a wave, while the back wheels will have a wave behind them. The roller pushes the material backward instead of forward and, for this reason, if the maximum compactness is desired in a roadway. it is better to roll backward. Thus the front wheels of a roller, in their action, resemble a horse-drawn vehicle, while the hind wheels, that is the larger wheels, resemble the action of a self-propelling machine. Of course this action can only be observed while the material is soft and plastic and becomes less and less visible as consolidation occurs.

The action of the automobile wheels doomed macadam. Methods had to be devised by which the particles could be kept in place with a force strong enough to resist dislodgment, and the bituminous pavement had to be used on the country roads as well as city streets. In other words, all roads had to be paved with some bituminous material.

The subject of bituminous roads must be divided at the outset into two subjects, and is naturally interesting from two different standpoints. There is the building of the road itself, the work of road builders, that is the handlers of dirt and the masters in the art of handling dirt efficiently and economically. I shall not touch this subject at this time. Then there is the pavement proper, which, with its foundation, is placed upon the road after the road builder has completed it and upon which really the existence of the road depends. This is the subject that I will talk upon.

As pointed out in a short reference to macadam, it was found in the very early days that it is impossible to construct a road having the same material throughout, and lacking an abrasionresisting surface. Engineers, in going through the stages of building tar roads in the early seventies, found that the road had to be build out of different materials: one, the supporting material, or the load-carrying layer, and the other the abrasion-resisting laver. The loadcarrying layer-or the foundation of the pavement, as they call it now-in the olden days was all "black;" 1, 2, 3, 4, 5, and even 6 layers were laid as a foundation, always covered with some coating from 1/4-inch to 2 inches of abrasion-resisting material. The lavers were variously called binder, cushioncoat, etc., but essentially were nothing but the load-carrying layer or foundation. They were made different in an attempt to either secure the wear-resisting layer to the foundation or to prevent the attack of water and shoving.

(A) The load-carrying layer must have as its principal, main, and in fact only, qualification—rigidity. Its whole and only object and function is to support the wear-resisting layer. It can be constructed of anything and in any way as long as a rigid surface is produced. Due care must be exercised that this surface may remain rigid continuously and not suffer distortion through bad drainage or through cracking

of ill-chosen or poorly-mixed materials. How many roads have been ruined by lack of knowledge of how to select and combine bituminous materials and ob how many roads have been ruined by imagining that concrete foundations are simply a mixture of sand, stone, cement and water, without any "gray matter." More care is required to produce a permanent concrete foundation, than to construct a bituminous foundation. cannot go into the matter of the proper construction of this layer because I am concerned principally with the upper wear-resisting layer. What is the prime requirement of this laver to-day when the automobile is the chief user of roadways? It is smoothness. A road to-day must be smooth. The users of the road and the payers for the road want a smooth road. They want a road over which they can go at any rate of speed without being jolted and jarred and without racking their machine to pieces. You yourself will go a mile out of the way to get a smooth bit of roadway. The ordinary driver will do the same; so we all must admit that the first requisite of a roadway to-day is smoothness. The second requisite is permanent smoothness. road must remain smooth, for temporary

smoothness in a new road is of no avail. This smoothness depends upon the lower layer or foundation, for of what use is the best material if the foundation gives way under it? The very best material may remain intact, may follow all the depressions, sinkings, and upheavals of the foundation, but will not produce a smooth road. Nothing that I have ever observed has illustrated this point better than the experiments made on the Bates Road. No doubt you have all seen the reports of these experiments. There were various foundations of various thicknesses, covered with various materials, sheet asphalt,

bituminous concrete, brick, concrete, All of them failed whenever the toundation failed, regardless of what they were, and if you examine that report from that point of view you will find that one material is as bad as another material if the foundation gives. It is folly to put any material on a bad foundation unless no traffic is expected on the road, and if no traffic is expected, what is the use of paving the road? Having a good foundation or a loadsupporting layer, as I call it, the functions of the abrasion-resisting laver are lessened, and it is universally accepted and experience has taught us that these two layers cannot be combined into one uniform layer and give results I think experience with concrete pavements has proven that beyond all cavil. abrasion-resisting layer then has to withstand abrasion, the action of the elements and the action of ageing. resist the action of abrasion the material must combine within itself two qualities: Resistance to displacement - viscosityand resistance to wear-toughness. overcome viscosity various methods have been used. In the coal tar days lime, sulphur, ashes and various other nostrums were added to the tar in order to toughen it when mixed with sand. This soon fell into disuse on account of the lack of uniformity in coal tar products, since each gas house produced a different kind of material, due to the different coal and varying methods of distillation employed.

In the Sheet Asphalt industry finely ground materials such as carbonate of lime, ground clay, Portland cement and various other materials were used to toughen the pavement, the intention always being to use the maximum amount of bitumen, or as much as could be used without causing the pavement to roll and shove. In all cases attempts were made to use a maximum amount of bitumen.

Then the Warren Bitulithic Pavement was invented, depending on the structure of the mineral for support, thereby relegating to the bitumen as little work as possible, allowing the bitumen to be used in thicker layers between the particles and giving the whole structure a maximum resistance to displacement. By doing this, coarse particles of stone had to be used-the stone coming to the very surface of the pavement, had to be covered with a thin flush coat which in time wore out, causing the troubles of the old macadam to a more or less degree. A decided improvement on this was the rolling into the bitulithic surface of a thin layer of fine material which became part of the pavement and which protected the stone and was in return held firmly by them, thus forming a smooth continuous roadway. Thus again, after many years, the experiences with the old macadam had been repeated, that is, the division of the road surface into two layers having separate and distinct functions.

Anyone who has studied and watched pavements (I don't know how much time you gentlemen have had to do this, but most of you have no time to try experiments nor are funds usually available for that purpose) must realize that the bitumen or amount of bitumen plays a very important part in the pavement. You all have seen concrete roads patched with tar and you all have seen patches of this tar stay there for a number of months, making an almost ideal surface, and you all must have seen that black patch suddenly disappear and be renewed again, stay for awhile and disappear again. From that you will realize that while pure bitumen is perhaps the best abrasionproof material, it will not resist wear. In the first place it is readily peeled off: secondly, mineral matter is incorporated into it by traffic, until all the

(Continued on page 351)

A NEW TYPE OF DEEP WELL PUMP

A New Type of Deep Well Pump Has Recently Been Perfected by the Worthington Pump & Machinery Corporation Operating on a Principle Heretofore Not Used In Pumps of this Kind. Although the Pump is of the Rotary Class the Water is not Elevated by Means of a Conventional Type of Impeller But A Form of Propeller is Used Very Similar to that Employed for Propelling Ships.

The most radical departure in this pump which will very likely interest present and future users of deep well pumps is shown in Fig. 1. This is a section through a well casing and drop pipe. It illustrates one set of discharge vanes, the impeller, the shaft, the shaft coupling, and the bearing.

Fig. 2 shows the general arrangement of this pump as applied to deep wells with a direct connected standard vertical motor drive on the head. As will be noticed, with this arrangement there is no conversion from horizontal drive to vertical drive. There are no right angled drives at all. Everything is in a perfectly straight line.

In comparatively shallow wells, one set of impellers might suffice, but in



Fig 1. Showing the ideal arrangement of the impeller and discharge vanes in the new Axiflo pump.

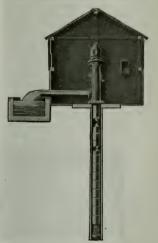


Fig. II. General arrangement of Axiflo pump in well of small diameter.

very deep wells a number of impellers are necessary, these being placed one under the other, thereby making the pump equivalent to a two stage, three stage, or other multi-stage pump.

Where it is desired or necessary to operate this pump by means of a horizontal motor, steam engine, internal combustion engine, or by other means through a horizontal drive, a vertical pulley for belt driving may be placed on the head as shown in Fig. 3.

Where water must be elevated to a considerable height above the ground level a centrifugal "booster pump" is added to the Axiflo and connected to the pump shaft at the ground level. This combination gives one compact unit the same as would be ordinarily obtained by using two different pumps, one for deep well pumping and the other for above surface elevating. Fig. 4 shows this booster pump at the bottom with the discharge pipe emerging at the left. At the top is a standard vertical motor. Midway between the top and bottom is shown the housing for the thrust bearing.

The impellers are made of hard bronze, capable of withstanding the corrosive action of the usual well water. The number of and angle of impeller blades, together with their width and thickness vary with the conditions and are based upon calculations and tests which indicate the proper proportions for capac-



Fig. IV. Showing direct motor-driven head, thrust bearing housing, and "booster" pump.



Fig. III. Belt driven Axiflo pump utilizing a horizontal motor.

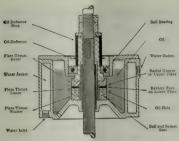


Fig. V. A section through the thrust bearing.

ity and efficiency. The discharge vanes, clearly shown above the impeller in Fig. 1, receive water from the impeller and convert the velocity of flow into pressure and at the same time cause the water to flow upward smoothly along the axis of the pump. These vanes eliminate eddy currents and their accompanying waste. The shaft is of nickel steel and is divided into easily handled lengths, coupled together by long steel couplings insuring good alignment.

THRUST BEARING.

The weight of the moving parts and the water column thrust are taken up in a specially designed three-plate self-adjusting type bearing, a cross sectional view of which is shown in Fig. 5. The top or plate thrust rotor is an iron plate which rotates with the shaft. In the center is a babbitt-faced bearing plate, the upper face of which is scraped to a true bearing surface with the top plate. The bottom plate or thrust washer supports the middle plate on a ball-and-socket seat.



LEAGUE OFFICIAL NOT INTERESTED IN PUBLISHING HOUSE

The advertisement of a well-known publishing house exhibiting at Coronado displayed the name of a League official in such a way as to convey the impression that the official in question might be financially interested in the exhibitor's business, or the sale of a certain book on street laws.

The book referred to was compiled several years ago by the Executive Secretary of the League pursuant to instructions of the committee of the League which framed the Improvement Act of 1911 and the Improvement Bond Act of 1915. Subsequently the President of the League appointed a committee

to draw up model forms for use in conducting proceedings under said acts, and the Executive Secretary took a leading part in preparing said forms.

The publishing house referred to has a written contract for the publication of Pacific Municipalities, the official organ of the League, which contract, among other things, requires that said publishing house shall have the printing and publishing of all other books, legal forms and printed matter issued by the League, but neither the Executive Secretary nor any other League official has any financial interest in their publication or sale.

<u>JAFRANCE</u> BROCKWAY TORPEDO



THE FIRE CAR

This is a piece of fire apparatus of which any city can well be proud.

It consists of the LaFrance-Brockway chassis combined with the famous American-LaFrance Fire Fighting Equipment. Furnished in single or double tank combination car, triple tank chemical car, or 300-gallon pumping car.

DETAILED SPECIFICATIONS ON REQUEST

<u>| Merican-JaFrance Fire Engine (Jompany Inc.</u>

151 NEW MONTGOMERY ST SAN FRANCISCO, CAL. 1302 WASHINGTON BUILDING





San Joaquin County (California), Mariposa Road. Old macadam re-surfaced in 1912 with three-inch asphaitic concrete. In excellent condition — maintenance cost nothing.

Re-surfacing can save you Thousands of Dollars

From \$6000 to \$10,000 per mile can be saved by re-surfacing worn-out pavements with durable asphaltic concrete.

The qualities of asphaltic concrete particularly adapt it to this type of pavement reconstruction—it is adhesive, insuring a thorough bond with the old base—waterproof, preventing seepage to the subgrade—shock-absorbing, tending to protect the base against the force of impact. It is durable—its first cost is reasonable and its maintenance cost is little or nothing.

Another fact of importance to business men as well as to motorists, is that asphaltic concrete pavements can be opened to traffic as soon as they cool, thus preventing long interruptions to traffic.

Re-surfacing with asphaltic concrete can save thousands of dollars in new pavement construction. We shall gladly furnish you with full details.

STANDARD OIL COMPANY

ASPHALTIC CONCRETE for durability

CALOL ASPHALT for BEST RESULTS

New Jersey Court Rules Against Single Family Districts

On July 31 a peremptory writ of mandamus was ordered by Chief Justice Gummere of the New Jersey Supreme Court, requiring the building inspector of the town of Westfield to issue a certificate of occupancy for a twofamily residence in a district which had been restricted to single families under the zoning ordinance adopted by the town on December 5. 1921. The decision says, in part:

"The ordinance appealed to is sought to be justified upon the ground that it is authorized by Chapter 240 of the laws of 1920 (Pamph. Laws 455), which confers upon municipalities power to regulate the location and use of buildings-including residences-for the purpose of promoting the public health, safety and general welfare. It will be observed that this statutory power is a limited one, and does not authorize municipalities to restrict the use of residential properties, unless such restriction is reasonably necessary for the carrying out of the declared legislative purpose. It follows, therefor, that, where a municipality attempts to regulate the use of such properties by restrictions which have no tendency to produce the results indicated by the Legislature, such municipal action is purely arbitrary; not authorized by the act of 1920; and, consequently, null and void."

Other Recent Zoning Decisions

New York, Kimball Co. v. Fox. 120 Misc. 701 .- A private covenant forbidding certain uses on given premises is not rendered entirely technical and unsubstantial, because most of the uses included in the covenant are also forbidden by a subsequent zoning regulation. It is true that the covenant is an encumbrance, and the zoning regulation, being a police regulation. is not; but-apart from the fact that the covenant embraces some uses not covered by the zoning regulation-that regulation is subject to change, while the covenant-except by consent-cannot be changed.

Wisconsin, Piper et al. v. Ekeru, Atty. Gen., Supreme Court, May 25 and June 18, 1923 .-Statute 1921, Sec. 4444g, limiting, without compensation, the height of buildings on property surrounding the State Capitol building is an unreasonable exercise of the police power, and violates the state constitution prohibiting the taking of property for public use without just compensation, and the due process clause of the United States Constitution.

It will be noted that this law is neither a uniform height regulation for the entire city, nor a regulation applicable to a portion of the city, as part of zoning regulations covering the entire city, either one of which, if reasonable, would undoubtedly have been sustained.



PARAGON Fire Hose

"Anything less than the best in fire hose is a losing investment,"

United States Rubber Co.

EUREKA FIRE HOSE DEPARTMENT 1104 I. N. VAN NUYS BLDG. LOS ANGELES, CAL

> 812 SEABOARD BLDG. SEATTLE, WASH.



NOTICE

Lewiston, Idaho-The letting of contracts for water works improvements which was scheduled to take place September 5th, has been postponed, and bids will be received and contract awarded October 10th, 1923. This work will consist of seven sections-Cast Iron Pipe, Hydrants and Valves, Centrifugal Pumps and Motors, Filter Equipment, Pipe Laying, Concrete Reservoirs, and Purification Plant. Plans and specifications are on file at the Los Angeles office of Burns & McDonnell Engineering Company, 404 Marsh-Strong Building, for inspection.

EDWARD GLASS ARCHITECT

UNDERWOOD BLDG. SAN FRANCISCO

(Continued from page 544)

cementitious properties of the material are destroyed. Especially is this process hastened by the presence of moisture. We must admit, theoretically that bitumen is the wear-resisting material. The more bitumen, the more abrasion resistance. The purer the bitumenthat is the less fine material such as stone dust, cement, etc .- is mixed therewith-the more abrasion-resistant it is: and further you must realize that the pavement of to-day, as I pointed out before, is subjected to entirely new forces. The calking effect of the horse is entirely gone, and substituted therefor is the intense local pressure and sideway movement caused by the automobile tire. The chipping effect is eliminated. Short intense movement causing fatigue is substituted therefor. I know of pavements, which before the intense automobile days, have given complete satisfaction for as much as ten years and which after the automobiles used them for a short time, became badly rutted.

You must further have observed how concrete roads, or the surface of concrete roads, are ruined through local Concrete roads beautifully laid soon become rough. Surely the tire didn't chip the pavement and cause the upper 1-16 of an inch to crack off and start the deterioration of the rest. It is the slow, intense, persistent, local pressure caused by the tire. The particles are intensely stressed. Even the microscope will not show any fracture. This stressing is repeated and repeated until fatigue sets in and the particles are permanently dislodged, causing roughnesses, small voids and irregularities which make further displacement easier and easier, especially if augmented by water and still more by frost. When we consider this fact we must realize that a wearing surface, to resist traffic continuously, must have added thereto a new quality not possessed by rigid materials, and that is the ability to re-cement itself.

Among the tests I like to give a pavement is to subject it to a sand blast. Take for instance a piece of concrete, coat one small section of it with a tough bitumen, expose it to a sand blast, then notice the effect. The concrete will be worn with astounding rapidity, while the bitumen will not be attacked at all. Or take a mixture composed of stone and sand and expose it and it will be worn away almost in proportion to the amount of bitumen it contains. There is nothing new in this test and it is a common method of making groundglass designs on glass. The sections that are desired to be left clear are coated with wax, paraffin, or such material, while the sections where the ground-

(Continued on page 355)

N. CLARK & SONS

INCORPORATED 1889

Manufacturers of

ARCHITECTURAL TERRA COTTA, PRESSED BRICK VITRIFIED AND TERRA COTTA PIPE HOLLOW TILE FIRE PROOFING

FIRE BRICK TILE AND KINDRED CLAY PRODUCTS

WORKS: WEST ALAMEDA SAN FRANCISCO Office: 112-116 Natoma St.

Equalization of Tax Assessments

Revaluation of Real Estate and Improvements By Modern Unit Systems of Realty Valuation

Solve Tax Assessment Problem: Establish Equity Between Taxpayers; Assure Necessary Increase In Tax Assessment Total; Added Municipal Revenues with Reduced Tax Rate, and Expanded Bonding Capacity

SYSTEM INSTALLED AND ADOPTED BY

Los Angeles City and County; Stockton. Santa Barbara, Marysville, Benicia, Redding, Manteca, all Arizona and Texas Cities, Portland, Orc., Cleveland, Des Moines, Denver, and Others.

Consultation By Appointment. Write

JAMES G. STAFFORD

CONSULTING TAX VALUATION SPECIALIST

Box 400 Pacific Municipalities

529 PACIFIC BLDG., SAN FRANCISCO, CALIF.

Sacramento Capital National Bank Bldg. San Jose Bank of Italy Bldg. Los Angeles Fay Building

WILLIAM DOLGE & CO.

Certified Public Accountants Municipal Accounting

Audits, Examinations and Special Examinations. Accounting Procedures for Municipal Utilities. Budget Systems Installed

Telephone Sutter 697

369 Pine Street

San Francisco, Cal.



It's the Last Fraction of Control

that often saves the motorist. And with Concrete pavement, that fraction is available for you.

Good brakes, good tires, good driving—all are necessary, but above all there must be a skid-proof pavement.

Concrete Streets are skid-proof. Tires can grip the firm, gritty surface even in wet weather.

Concrete is clean, permanent, hole-proof a pavement after the motorist's and home owner's own heart.

Our Booklet R-4 tells other interesting things about Concrete Streets. Write for your copy.

PORTLAND CEMENT ASSOCIATION

785 Market Street San Francisco, Calif. 548 South Spring Street Los Angeles, Calif.

A National Organization to Improve and Extend the Uses of Concrete

Offices in 23 Other Cities



CITY OF ARCADIA

West side of Santa Anita Drive at intersection of Huntington Drive. This connects Foothill Boulevard and Valley Boulevard, the heaviest-travelled arteries leading to San Bernardino and the Santa Fe Trail.

MAINTENANCE NIL!

This wonderful highway of 5" macadam, laid way back in 1913 with Gilmore Asphaltic Road Oil Binders is one of the numerous proofs of the efficacy of macadam construction and Gilmore Oil Products for macadam, when long-time service is desired.

Ten years ago the Gilmore Trucks spread oil on this road.

Twenty million cars and trucks have since passed over it!

Stress and strain, wear and tear, erosion, decomposition, mechanical shock have not served to impair it in this period of time.

Maintenance nil! These words are whole volumes of praise!
Think what credit a road like this is to the contractor!

Gilmore Asphaltic Oils for Macadam Construction

GILMORE OIL COMPANY

700 I. N. Van Nuys Building Los Angeles, Calif. (Continued from page 351)

glass effect is desired are left exposed. When the glass is then subjected to a sand blast the sand impinging upon the uncovered glass, perhaps up to force of thousands of pounds per square inch, chips microscopic fragments and carries them away, while the sand, which hits the waxed section only moves a bit of wax at the point of impact and replaces it with the particles following, thus only causing a slight continuous displacement of wax, hither and thither and protecting the surface below. Exactly the same thing takes place in a less violent fashion, in a pavement.

An abrasion-resisting material must protect the load-carrying layer below. Without it the load-carrying layer will be worn down, and again, without the proper load-carrying layer, the abrasion-resisting layer will be distorted. That is, the abrasion action which a wearing surface must primarily resist.

The second force which it must resist is rolling upon itself, thus causing ruts and making the pavement useless. Pure bitumen would rut exactly that way, and therefore is not suitable as a protective coat, because a proper pavement, as we can define it now, is a smooth, undisturbable, unabradable surface, and to produce this surface we must have a tough bitumen combined with some mineral matter. The question now arises how to toughen the bitumen, and what kind and size of mineral matter should be mixed therewith.

The first answer to this would be, just make your bitumen harder and it will be tougher, but in hardening the bitumen you make it more brittle and cause the surface to crack with slight changes of temperature. After trying many experiments it occurred to me toughen the bitumen with fibre, and after trying almost every known fibre,



BEAUTIFUL LAWNS

Easily and Economically Kept Beautiful with our Modern
Mowing Machinery

MOWERS FOR HAND-HORSE-POWER OR TRACTOR USE

H. V. CARTER MOTOR CO.
52 Beale Street San

San Francisco

WE SOLICIT MUNICIPAL ORDERS FOR



VITRIFIED CLAY SEWER PIPE AND FERGUSON SEGMENT SEWER BLOCKS

THE PACIFIC CLAY PRODUCTS, INC.

600 AMERICAN BANK BLDG.

LOS ANGELES, CALIFORNIA

BURNS & McDONNELL

Engineering Company
CONSULTING ENGINEERS

Water Supply, Waterworks, Sewerage and Sewage Disposal, Power Plants, Gas Plants, Valuations and Rate Investigations of Municipal Utilities

LOS ANGELES, CALIF. Marsh-Strong Bldg. KANSAS CITY, MO. Interstate Bldg. vegetable or animal, it occurred to me to use a mineral fibre such as asbestos.

No doubt you all know well what asbestos is; some of you, however, may not remember how it looks, and I, therefore, have brought with me a few specimens both of the crude and prepared material. The largest source of supply of asbestos is in the Black Lake District of Canada, near Ouebec. The next largest supply is in South Africa and Italy, while some asbestos of a poor quality is found in the United States. There are some undeveloped deposits of the amphibole asbestos in California, and we hope that some day these deposits will be available for paving purposes. Up to the present time, however, all the commercial amounts have to be shipped from Canada.

For the production of the Asbestophalt Pavement this variety (B) is used. It is a fibre one quarter inch long and shorter, is mixed with bitumen in the approximate proportions of two to oneone part of asbestos to two parts of bitumen. Here is the bitumen (C) and here is the same bitumen to which has been added the requisite amount of asbestos. (D) The whole nature of the bitumen has been changed. A remarkably tough, rubber-like and leatherlike, structure has been formed. asbestos being divisable into microscopic fibres 5/1000 of an inch and thinner, all become saturated with the asphalt and mat together into a felt-like structure. This structure is absolutely abrasionresistant as can be shown by any test. The asbestos acts as a reinforcement to the asphalt; and through the absorption of the asphalt by the asbestos fibre much of the adhesive property of the asphalt-which is a great deal higher than the cohesive property-is taken advantage of, and the whole mass is toughened by making the asphalt-impregnated fibre adhere and mat together.

BOUND TO HAVE GOOD ROADS



Volunteer Roadbuilders installing Armeo Culverts, Citrus Heights Road Day, Sacramento County, March, 1923.

CALIFORNIA CORRUGATED CULVERT COMPANY
LE ROY STREET, LOS ANGELES
FIFTH & PARKER STS., WEST BERKELEY

The addition of the asbestos does not destroy the adhesive properties or the cementitious properties of the bitumen as does finely divided mineral matter such as clay, ground rock, etc., but increases them, causing the mixtures to have entirely different properties.

Of course it would be too expensive and useless to use a material such as this as a pavement, especially while all engineers have been laying two-inch payement, and a reducing of this thickness seems to savor of the heretical, it now being the fashion to lay bituminous pavements two inches thick. For this reason this bituminous saturated asbestos mat is diluted, spread apart, thinned with a filler such as sand or fine gravel and since the material itself is of such toughness the kind of mineral matter is of no importance as long as it does not contain any very fine material. By this I mean 80, 100 and 200 mesh. All materials such as sand contain a

small amount of this, while sheet asphalt sand, as used in sheet asphalt mixture with the limestone dirt usually constitutes about 40% of the mixture. I prefer to use a clean sand such as is considered the best for Portland cement concrete, ranging from one-quarter inch or one-eighth inch down to fifty or eighty, and having only the always present two to three per cent fine. About seventy-five per cent of this sand is mixed by any suitable means with the bitumen-soaked asbestos, and is then laid in the ordinary way at a temperature of about 400, one inch thick or thinner upon any suitable foundation. This layer is tough. It contains twelve to fifteen per cent of bitumen, depending upon the nature of the sand, more bitumen than any mixture ever had heretofore, thus producing the abrasonresisting qualities of the bitumen itself enhanced and multiplied nearly ten times by the presence of the fibre,

PIPE TANKS CULVERTS

For PERMANENCY use STEEL For OUALITY buy "WESTERN"

We furnish Pipe from 1-16" to 1" thick in any diameter.

WESTERN makes STEEL TANKS for all purposes.

Designed, Fabricated, Erected anywhere on the Pacific Coast.

WESTERN CORRUGATED CULVERTS will give service heretofore unknown, as WESTERN CULVERT METAL is of unequaled rust-resisting, non-corrosive Quality. You will find nothing but "WESTERN" Culverts under the State Highways.

Let Us Figure Your Specifications

Western Pipe & Steel Co. of Cal.

444 Market Street SAN FRANCISCO

LOS ANGELES

AFT BAKERSFIELD

FRESNO

and stiffened and prevented from rutting by the mineral aggregate. It produces an ideally smooth pavement which continues to remain smooth, and which fulfills all the desiderata that experience and a study of the paving art have taught us a pavement must have in order to stand the traffic of to-day.

This is the theory upon which the Asbestophalt Pavement has been built, and actual practice has shown that I was correct in interpreting paving history for all the test specimens which have been laid all stood up without wear or rutting. For four years or more Asbestophalt has been laid as a resurfacing material because it is easier to tell an engineer or have him try a one-inch mixture on granite blocks, old brick pavements or old concrete foundations, than to have him specify a new roadway composed of either black or concrete base having a one-inch surface. Even if he is convinced himself that one inch of this material is as good as two he is reticent to specify. However, after he has watched a one-inch surface placed upon a brick or block pavement showing no wear whatsoever, in a number of years he himself, naturally, will say that if it lasted there, it surely would last on other streets having a like amount of traffic, for stone block streets are usually heavily travelled streets, laid as new pavement. He may even say that three-quarters of an inch is enough in a case like that, and be absolutely correct.

What I ask you gentlemen is not to take my word entirely on this subject but lay a small area, half a block or so, somewhere, and watch it. In a year or so from now lay the material and become a pioneer in this best construction showing the broadness of your mind and letting the public benefit by it. Lay a few blocks as a new construction, try it and watch it.



TRIDENT METERS

Split Case Meters for Warm Climates C. I. Breakable Frost Bottoms for Cold Climates Hot Water and Oil Meters. Crest Meters for Large Flows Compound Meters for all streams, Large and Small

TRIDENT DISC

Sold 158,000 in 1921

A record unsurpassed in the history of the Meter Business

MANUFACTURED BY

NEPTUNE METER CO.

NEW YORK

PORTLAND, SEATTLE, SPOKANE, SAN DIEGO

LOS ANGELES OFFICE AND WAREHOUSE 701 East Third Street



TRIDENT CREST
SAN FRANCISCO OFFICE
320 Market Street

REVIEW OF THE LATEST BOOKS AND ARTICLES ON CITY PLANNING

Conducted by MARY T. HEDGES
Of the State Commission on Immigration and Housing.

NOTE—This department offers its services to cities and individuals wishing to secure reference material on any of the various phases of city planning. Inquiries may be addressed to the office of the commission or the league.

THE LAW OF CITY PLANNING AND ZONING

FRANK BACKUS WILLIAMS, Macmillan Company, New York, 1922.

"In free countries like ours one of the most important facts in any public undertaking is the existing law with relation to it. No public enterprise in the United States can be accomplished or even actually begun except by methods sanctioned by the law * * A failure to know and appreciate this fact, especially in new fields of endeavor like City Planning, is one of the commonest causes of failure of our officials and public-spirited citizens to obtain practical results."

How far may a city restrict private enterprise for the common good? To what extent does the law sanction municipal regulation of industry, condemnation of private property, fixing of setback lines, and the setting aside of land for public use? These questions confront all cities making planning or zoning ordinances, and while the general powers of municipalities in these respects have been fairly definitely determined, new cases requiring special application of existing laws are continually arising, and a whole body of city planning law is gradually developing. Many questions still remain unsettled, as for example, the establishment of single family residential districts, building setback lines, zone condemnation, replotting, and excess condemnation. The bulk of the decisions so far have been in favor of the ordinances, and, as Mr. Williams writes. "Proper zoning in this country would now seem to be reasonably secure against judicial attack. It must not be forgotten, however, that the police power

varies with local conditions in different parts of this country; and that it is not impossible that there are details or phases of zoning which will be held valid by the courts in some states but will not be so sustained in others."

Cities initiating planning or zoning legislation, or who have found defects in existing laws, are interested in the experiences of other cities with such legislation. Until recently, all this information was so widely scattered as to be practically useless except for individuals or cities with research departments at their command, but Mr. Williams has brought together for the first time a comprehensive collection of cases, decisions, statutes, ordinances, and opinions, with full discussion of their bearing on zoning and city planning. Topics of immediate and practical interest are set back regulations, the municipal sphere of influence in public utilities, excess condemnation, acquisition of land, city planning administration, city planning finance, and city

planning from the aesthetic side. Legal opinions and decisions are quoted, and over three hundred cases are cited. There is a very complete list of statutes and ordinances covering the various phases of zoning and planning, and a bibliography which should be helpful to the student of city planning.

Mr. Williams' training and experience have been such as to particularly fit him to speak with authority in this field. He is a member of the New York Bar, founder and chairman of the City Planning Committee of the New York City Club, member of the General

Committee of the National Conference on City Planning, was sent abroad twice by the city of New York to investigate and report upon building regulation and zoning, and drafted the New York City Planning Law of 1913. He has been writing and lecturing on city planning law for years. "The Law of City Planning and Zoning" is not a technical book in the sense that it is unreadable or uninteresting for the layman. The mass of information which it contains fits it primarily for a reference book of continuing helpfulness to city officials, planners, or students of city planning.

STATE ENABLING ACTS OF 1923

Since January of this year Iowa, North Carolina, Nevada, and Wyoming have passed enabling acts authorizing the enactment of zoning ordinances.

Information for Iowans: Two pamphlets have been recently issued in Iowa—
"Town Planning," published by the Iowa Town Planning Association to inform citizens of the meaning and benefit of planning, particularly emphasizes the aesthetic value of zoning and planning. "Zoning for Iowa Cities and Towns," by Rolland S. Wallis, Iowa State College, contains the zoning law of Iowa with a discussion of the necessity for zoning and the means of obtaining it.

Securing Publicity for City Planning: Johnstown, Pennsylvania, and Norfolk, Virginia, have worked along similar lines in popularizing their city plans. The September issue of "The American City" tells of Norfolk's experience, and "Playground," May, 1923, carries an article by Leo J. Buettner, Secretary, Municipal Recreations Commission, Johnstown, outlining the plan which has proved so successful for that city.

Regional Planning: Convincing charts in "The American City," September, 1923, ("Kinks in Municipalities," by William D. Ennis), demonstrates the advantages of regional planning for adjoining municipalities.

Financing Street Widening: The Cleveland Chamber of Commerce describes the co-operative plan by which a narrow street was transformed into an automobile thoroughfare, and the consequent increase in property values. ("American City," September, 1923.)



PU LC HERSE!

Pacific Municipalities

A Monthly Review of Municipal Problems and Civic Improvements

OFFICIAL ORGAN OF THE LEAGUE OF CALIFORNIA MUNICIPALITIES



On the road to Monterey, location of the 1924 Convention-Carmel Mission, erected 1771

LEADING ARTICLE IN THIS ISSUE

Proceedings of the Twenty-fifth Annual Convention of the League of California Municipalities at Coronado, California, (Continued)

SATISFACTION the Nation's Verdict for Concrete Roads

Regardless of time, place or conditions, Concrete Roads are giving satisfaction to those communities which realized the advantage of adopting this rigid highway paving. And this satisfaction means many things—satisfaction in performance, in economy, in comfort and in increased prosperity.

The engineer who builds them, the motorist who drives on them, the taxpayer who invested in them—all join the mighty chorus of approval for enduring highways of Concrete.

Twenty-one states in the Union had more than 250 miles of concrete road completed or under contract on January 1, 1923. Here is the roll:

STATE Mileage equivalent 18-ft, pavement	STATE Mileage equivalent 18-ft. pavement	STATE Mileage equivalent 18-ft, pavement
California	Maryland	Pennsylvania 1.898
Illinois	Minnesota	Virginia 438
Iowa 388	New Jersey 452 New York 2,157 North Carolina 518	West Virginia 486

And these counties swell the list. Each has more than 100 miles

	of con	crete road	within i	ts bound	laries:		
STATE	COUNTY MILEAGE						MILEAGE
Arizona	Maricopa 302	Illinois	Cook	270	Ohio	Huro	n125
Cailfornia	.Contra Costa .119	**	Lake	103	Oklahoma	Tulsa	112
**	Contra Costa . 119 Kern 173 Los Angeles . 146	**	Sangame	on108	Pennsylva	nia Erie.	100
44	Los Angeles . 146	**	Vermili	on153	Washingt	on . King.	115
**							
**	Riverside 138	Michigan	Wayne	310	11	Snoh	omish 135
41	Riverside 138 Sacramento 147	Mississipp	i Washin	gton .122	**	. What	com .125
*1						n Milw.	aukee 187
**	Stanislaus 182	41 41	Chautai	100 ICHIB	44	Outas	amie 123
**	Tulare152	40 46	Erie	102	**	Wau	kesha 112
41	Ventura135	60 46	.Suffolk	128	84	Woo	d104

Only rural highways are counted. The miles of concrete streets and alleys in thousands of thriving cities and towns are not included.

America has more than 23,000 miles of enduring concrete highways.

The public demands roads which give the greatest measure of service, saving and safety. That is why highway officials everywhere are building Concrete hard surface roads. They know from experience that no other road performs like Concrete.

PORTLAND CEMENT ASSOCIATION

785 Market St. San Francisco, Calif. 548 S. Spring St. Los Angeles, Calif.

A National Organization to Improve and Extend the Uses of Concrete

Offices in 23 Other Cities

Pacific Municipalities

AND COUNTIES

OFFICIAL ORGAN OF THE LEAGUE OF CALIFORNIA MUNICIPALITIES

Entered as second-class matter March 22, 1913, at the Post Office at San Francisco, California, under the act of March 3, 1879.

VUL. AAAVII	VO	L.	XXXVII
-------------	----	----	--------

TWENTY-SIXTH YEAR

No. 10

381

386

EDITORS											H.	A.	Mas	ON	and	W!	М.	J. I	Loc	ΚE
Editorial :	and	Bu	sines	3S (Offic	ce			Fift	th I	Floor	, P	acific	Bı	iildin	g, S	Ban	Fr	anci	sco

ADVERTISING RATES ON APPLICATION

Address all Communications to "PACIFIC MUNICIPALITIES," Pacific Building San Francisco, California

OCTOBER, 1923

NOTICE—Every city belonging to the League of California Municipalities is entitled to a copy of this magazine for each of its officials without extra charge. If not received kindly notify the Secretary.

A. Carlisle & Co., Printers, San Francisco

CONTENTS

	Page
DEL MONTE HOTEL. By A. C. Jochmus	363
RECENT COURT DECISIONS OF INTEREST TO MUNICIPALITIES.	
By Johnson W. Puterbaugh, City Attorney of Coronado	365
PROGRESS IN STREET CLEANING. By D. S. Cole, Production	
Manager, the Butler Mfg. Co.	368
MUNICIPAL DISTRIBUTION OF MILK. By Dr. C. L. Blake, Health	
Officer of Richmond	369
MUNICIPAL HARBORS. By Boyle Workman, Pres. City Council,	
Los Angeles	373
ACCOUNTING SYSTEMS FOR MUNICIPALLY-OWNED UTILITIES.	
By George H. Wood, Controller of Accounts, Pasadena	375
TREE PLANTING AND ITS RELATION TO MUNICIPAL PROGRESS.	
D. W. D. Mitchell of Los Angeles	379

TEST HIGHWAY AT PITTSBURG, CALIFORNIA. By Floyd Aldrich, Highway Engineer in Charge of Construction

CHEAP ELECTRICITY AS A POPULATION BUILDER. By H. A. P.

LEAGUE OF CALIFORNIA MUNICIPALITIES

Organized 1897

Affiliated with the Bureau of Municipal Reference, University of California

OFFICERS

Pressure: CHARLIN'S N. MIEKERFISC C. San Mater-View-Treesdeen NOMMAN'S MALFOURING Class Asserts of Pais Alto. Secretary-Treasurer, H. A. MASON, Bond and Ordinance Expert of the City of San Francisco Executive Secretary, Why. J. LOCKE Headquarters: Parofic Building, San Francisco Official Printers: A. Carillale & Co., San Francisco

A Printers: A. Carnsie & Co., San Francis

INFORMATION BUREAU

The Leggue of California Municipalities maintains in connection with the Secretary's Office, a Bureau for furnishing city and town officials with information on municipal affairs, and lossing copies of new ordinances and specifications. Officials are urged to make a free use of this Bureau. Kindly send a self-addressed stamped envisope in all candid send as each addressed stamped envisope in all cases.

Members of the California League of Municipalities

Alameda Covina Jackson Orange San Rafael Albany Corte Madera Kennett Orland Eanta Ana Alhambra Crescent City King City Oroville Santa Barbara Kingsburg Oxnard Alturas Culver City Santa Clara Amader City Daly City Lakeport Pacific Grove Santa Cruz Anaheim Davis Palo Alto Santa Maria Angels La Mesa Pasadena Delano Santa Montes La Verne Paso Robles Antioch Dinuba Santa Paula Arcadia Dixon Lemoore Patterson Santa Ross Arcata Dorris Lindsay Petaluma Sausalitu Arroyo Grande Piedmont Dunsmuir Livingston Sawtelle East San Diego Auhurn Livermore Pinole Sebastopol Avalon Lodi Pittsburg El Caion Belma Azusa El Cerrito Lompoc Placerville Sierra Madre Long Beach Pleasanton Elsinore Sissus Banning El Segundo Los Angeles Plymouth Shiledad Los Banos Point Arena Besmennet Вородов Belvedere Los Gatos Pomona Sopora Benicia Loyalton Porterville South Pasadena Berkeley Potter Valley Exeter Lymwood South San Francisco Beverly Hills Fairfield Madera Blad Blaff St. Helena Manhattan Beach Redding Biggs Ferndale Stockton Fillmore Manteca Suisun Blythe Fort Bragg Maricopa Redondo Beach Sutter Creek Brawley Fort Jones Martinez Redwood City Sunnyvale Brea Fortuna Reedley Susapville Mayfield Burbank Fowler Rialto Taft Burlingame Merced Pregno Richmond Tehachapi Calexico Pullerton Mill Valley Blin Vista Tracy Calibatria Riverside Glendale Monrovia Calistoga Roseville Turlock Montague Carmel-by-the-Sea Glendora Ross Ukiah Chico Montebello Sacramento Upland Chino Salinas Vacaville Monterey Park Chowchilla Sanger Vallejo Chula Vista Hayward Morgan Hill San Anselmo Ventura Healdsburg Claremont Mountain View San Bernardino Venice Napa San Bruno Hemet Visalia Coalinga Hercules National City San Diego Walnut Creek Hermosa Beach Needles San Fernando Watsonville Colton Hollister San Prancisco Watte Colusa Holtville San Cabriel Newman Wheatland Concord Honolulu Newport Beach Huntington Beach Oakdale San Jose Corcoran Willows Corning Huntington Park Oakland San Leandro Woodland Coronado Hyde Park Oceanside San Luis Obispo Yuba City Treka Compton Imperial Otal San Marino San Mateo Total Corona Inglewood Ontario

Associate Members-Oregon: Astoria, La Grande

Pacific Municipalities

AND COUNTIES

OFFICIAL ORGAN OF THE LEAGUE OF CALIFORNIA MUNICIPALITIES

Entered as second-class matter March 22, 1913, at the Post Office at San Francisco, California, unifer
the Act of March 3, 1879.

DEL MONTE HOTEL

By A. C. JOCHMUS

Secretary Monterey Peninsula, Inc. and Pacific Grove Chamber of Commerce.

Del Monteis California's largest and best loved resort. It consists of a vast estate of 18,000 acres, maintained exclusively for the pleasure of its guests. It is the one place in America—and probably in the world—where you can do everything or nothing. Whatsoever you choose to do, be it golf, polo, tennis, horse-back riding, motoring, swimming, fishing, hunting, sailing, dancing, idling or working, can be accomplished under unsurpassed conditions of ease, comfort and laxury.

Situated on the historic Monterey peninsula, which prolects into the Pacific Ocean with the Old Bay of Monterey on one side

and the Sapphire Bay of Carmel on the other, Del Monte combines the cenic beauty and the benefits of seaside and mountain. Added to this is an mequalled seaside climate, which varies in average only ten degrees between winter and support.

Del Monte is but 125 miles southerly rom San Francisco. The trip by railroad, r auto over the perfect state concrete lighway, requires only approximately our hours with inspiring and picturesque cenery on all sides. From Los Angeles t is only an interesting and pleasing one-



HOTEL DEL MONTE at which the 1924 Convention will be held

day or night trip of 370 miles, via Southern Pacific Railroad or by automobile over paved motor highway, over the mountains and beside the sea.

Hotel Del Monte itself, in midst of a splendid floral park of great pines, ancient oaks, velvety lawns and flowering shrubs from many lands, sprawls over several acres in the shape of a great letter E, so that all of its 500 rooms face spreading lawns or huge oaks. First built in 1880, it was re-constructed in 1887 with a predominating idea of comfort and convenience. In equipment and arrangement it resembles a sumptuous

country club or suburban mansion more than a hotel.

From 16,000 to 18,000 guests register at the Hotel Del Monte from all parts of the world during the year, and additional thousands at Del Monte Lodge, Pebble Beach and other points on the peninsula.

Recreations and diversions are many. The Palm Grill is a favorite place for dinner-dances, teas and refreshments. The Casino offers billiards and other games. The Art Gallery, with its magnificent exhibition of canvases by California painters, is also used for motion picture shows and recitals. Concerts are held in the drawing room. The spacious and comfortable lobby, the sun porches, dining rooms, telegraph office, etc., are found on the lower floor. Conveniences, like shops for milady, drug store, barber shop, beauty parlor, curio store, etc., are maintained also on this floor as in a metropolitan

ROMAN PLUNGE

Swimming and bathing are enjoyed the year round in the mild, even climate at Del Monte. On the East Terrace of the hotel, almost at the Palm Grill door, is the Roman Plunge, a colorful and inviting bathing place. The openair plunge is 119 feet long and 59 feet wide, with circulating heated salt water. Its comfortable dressing rooms are located in the Sun Court, containing flower beds, palms, behind the classic solarium. The plunge is surrounded by lawns, flowers and trees of the park, giving it a situation of superb dignity and beauty.



Statement of the Ownership, Management, Circulation, Etc., Required by the Act of Congress of August 24, 1912

Of PACIFIC MUNICIPALITIES AND COUNTIES, published monthly at San Francisco, California for Oct. 1,

State of California, County of San Francisco

Hefore me. a Notary Public, in and for the State and County aforesaid, personally appeared Wm. J. Locke, who, having been disk seven necessing to have depressed and says that he is the editor of the Panife 3 uninephinics and Counties and that the following is, to the best of his knowledge and belief, a true-statement of the ownership, management and if a finite paper, the discussion of the counties of the discussion publication for the date shown in the above engine, required by the Act of August 24, 1912, embodied in section 443, Postal Laws and Regulations, printed on the reverse of this form, to wit

That the names and addresses of the publisher, editor, managing editor, and business managers are:
 Publisher, A. Carliale & Co., 251 Bush Street, San Francisco.
 Editors, Wm. J. Locke and H. A. Mason, 397 Berife Building, San Francisco.
 Managing Editor, Wm. J. Locke, 359 Pacific Building, San Francisco.
 Business Manager, A. A. Postelteviant, 529 Berife Building, San Francisco.

That the owner is: (If the publication is owned by an individual his name and address, or if owned by more than one individual the name and address of each, should be given below; if the publication is owned by a corporation than name of the corporation and the names and addresses of the stock holders owning or looking one per cent or more of the total amount of stock should be given.)

H. A. Mason and Wm. J. Locke, 529 Pacific Building, San Francisco.

3 That the known bondholders, mortgages, and other security holders owning or holding 1 per cent or more of total amount of bonds, mortgages, or other securities are. (If there are none, so state.) There are none.

4. That the two paragraphs next above, giving the mane of the sware, stockholder, and security holder, if any, contain not only the first of selectables and security, bullers as they appear upon the beaks of the company but also in cases where the stockholder of security holders argued upon the beaks of the company for any other fadurant perhaps the three persons or operations for whom such transfers around, as transfer or in any other fadurant perhaps the mane of the persons or operations for whom such transfers acting as given also that the sail two persons of the persons or operations for whom such transfers acting as given also that the sail two persons or operations for whom such transfers around a security of the persons or operations for whom the transfer around a security below.

WM I LOCKE

(Signature of editor, publisher, business manager, or owner.) Sworn to and subscribed before me this 10th day of October, 1923. HARRY B. LISTER, Notary Public (My commission expires Feb. 1, 1928.)

Recent Court Decisions of Interest to Municipalities

By Johnson W. PUTERBAUGH, City Attorney of Coronado.

(An address delivered before the Department of City Attorneys at Coronado, Sept. 11, 1923).

Mr. President and Delegates:

I have been requested to present before you a resume of the decisions rendered by our Appellate and Supreme Courts during the past year, touching matters of interest to municipalities.

In presenting these decisions, I have endeavored to group them according to the titles under which they are found in the digests, and to give you in my own words, a brief statement of the points involved and decision of the Court in each case.

CHARTERS

The word "manner," as used in the Constitution, does not include the element of "time," with reference to the time of publication of proposed amendments to city charters.

Moore vs. City Council of Los Angeles, 38 Cal. App. Dec. 644.

The Civil Service Commission of San Francisco has power under the provisions of the Charter of the City and County of San Francisco, to raise the rank of one eligible to appointment in the Police Department by adding to his rating on account of services in the war.

Jones vs. O'Toole, 65 Cal. Dec. 21. The provisions of the charter of the City of Oakland, relative to the pensioning of members of the Fire Department

ing of members of the Fire Department after 25 years' of service, are retroactive, and include service performed prior to the adoption of such provision.

Whitehead vs. Davie, 64 Cal. Dec. 369.

CRIMINAL LAW

The Police Court of the City of Sacramento has authority to amend its minutes according to sentence actually pronounced, and may impose cumulative sentences, without regard to the nature of the offense.

In Re Tung Fong, 38 Cal. App. Dec. 343.

After judgment of conviction of a misdemeanor has become final, a defendant will not be released on habeas corpus. The case defines what constitutes jeopardy, and holds that the defense applies to both misdemeanors and felonies, but must be specially pleaded.

Application of Howard Hanon, 66 Cal.

Dec. 97.

CONSTITUTIONAL LAW

The Constitutional provision prohibiting the incurring of indebtedness in excess of the yearly revenue does not require that the money be on hand or provided for at the time the indebtedness is incurred. It is sufficient if the indebtedness is within the income which will be provided in the ordinary course for that year.

Wyckoff vs. Force, 40 Cal. App. Dec. 555.

DEDICATION

The resolution of a Board of Directors of a corporation owning a tract of land, that a certain described portion thereof is reserved for park purposes constitutes a present offer to dedicate and the use thereof by the public for camping, parking of autos, picnics, etc., was sufficient proof of acceptance.

Phillips vs. Laguna Beach Co., 64 Cal. Dec. 532.

The dedication of land for street purposes is not affected by a covenant in the deed, to the effect that the city will pay for street improvements. Such a covenant is a personal covenant and not a condition subsequent. The benefits to accrue are sufficient consideration for the deed. The donor of land to public use cannot annex conditions which take away the power of the local authorities to improve the same.

Bou vs. Willits, 40 Cal. App. Dec. 400.

A ballot which the voter has marked with a pencil cross may be accepted and counted.

Costagnetto vs. Superior Court, 64 Cal. Dec. 337.

A particular provision in the statute will prevail over and be treated as an exception to the general provision. The posting of notice of special bond election is immaterial where such notice was published in a newspaper.

Imperial County vs. Garey, 40 Cal. App. Dec. 69.

ESTRAYS

The owner of domestic animals which have been driven off his premises against his will or without his knowledge, is not required to pay empounding fees specified in a county ordinance in order to recover such animals.

Poole vs. Clover, 38 Cal. App. Dec. 314.

A temporary injunction will not issue to restrain a water company from shutting off a consumer's supply for non-payment of rates, pending an action brought to determine the proper rate to be charged such consumer.

Pellisier vs. Whittier Water Company, 39 Cal. App. Dec. 21.

INTOXICATING LIQUORS

Neither the Eighteenth Amendment of the Constitution of the United States nor the Volstead Act were intended to affect or nullify state or local laws prohibiting the sale of alcoholic liquors.

In Re Tosello, 38 Cal. App. Dec. 61.

In adopting a statute, the Legislature or Congress may do so by reference, as well as by setting out the statute at length. This case refers to the provisions of the Wright Act.

In Re Frank Burke, 65 Cal. Dec. 77.

The enactment of the provisions of the Volstead Act, by reference in the Wright Act making it a general law of the state, thereby deprives the portions of a county ordinance fixing a greater penalty for the offense of all validity, because in conflict with such state law.

In Re Arthur Mingo, 65 Cal. Dec. 36.

A municipal corporation, in the exercise of its police power, may absolutely prohibit the sale of intoxicating liquors for medicinal purposes.

In Re M. W. Hixson, 40 Cal. App.

Dec. 521.

A section of a city ordinance prescribing a greater penalty for the offense of having intoxicating liquor in one's possession than prescribed by the Wright Act is void.

Olivieri vs. Police Court, 41 Cal. App. Dec. 113.

LIBEL

A public officer is not guilty of libel when acting expressly or impliedly in the discharge of his duty, and the question of good faith or malice are immaterial elements.

The Hale Company vs. Lea, 39 Cal.

App. Dec. 369.

MUNICIPAL CORPORATIONS

A provision in a city ordinance, intended as a revenue measure, requiring a retail drug store to pay fifty cents for each prescription filled for vinous, malt, spirituous, or alcoholic liquors containing more than one-half of one per cent. of alcohol by volume, and providing that nothing in the ordinance shall be deemed to apply to prescriptions of other ingredients containing more than one-half of one per cent of alcohol is discriminatory and void.

In Re Tepper, 39 Cal. App. Dec. 628. The regularity of the proceedings by which a municipality is incorporated cannot be questioned by an individual citizen or tax paver.

Van Wagener vs. MacFarland, 38 Cal. App. Dec. 350.

The proceedings for the levy and collection of a tax sufficient to pay a judgment recovered against the county is not a proceeding to incur indebtedness in excess of its annual income and revenue in violation of the constitution

Oscar Heyman and Brother Co. vs. Bath, 38 Cal. App. Dec. 604.

A municipal corporation in collecting the garbage of its inhabitants, under a municipal ordinance, acts in a governmental capacity, and is not liable for the negligence of its employees in making such collections.

Manning vs. City of Pasadena, 38 Cal. App. Dec. 736.

A municipal corporation cannot enact an ordinance containing traffic regulations in conflict with the motor vehicle

In Re John H. Murphy, 65 Cal. Dec. 44

The establishment and maintenance of a municipal market is a municipal affair, and a municipal purpose.

Banke vs. Bell, 41 Cal. App. Dec. 367. Under the Public Utilities Act of 1913. a municipal corporation may acquire an existing privately owned water system. and assess property owners therefor.

Santa Clara Valley Land Co. vs. Mehan, 41 Cal. App. Dec. 409.

POLICE POWER

A municipality possesses the police power to regulate the keeping of goats. In Re Mathews, 38 Cal. App. Dec. 726.

Where a permit has been given to conduct a public dance hall, the Board of Police Commissioners has not the right to arbitrarily and capriciously refuse to issue further permits.

The Pavilion Ice Rink vs. O'Brien,

39 Cal. App. Dec. 676.

PROHIBITION

A writ of prohibition will not lie, to prohibit a Board of Trustees from closing a street under the act of 1889, since proceedings are not of a judicial charac-

Garin vs. Pelton, 38 Cal. App. Dec. 740. PUBLIC OFFICERS

There is no property right in a public office, or in the enjoyment of employment with the government.

Boyd vs. Pendegast, 38 Cal. App. Dec. 58.

PUBLIC UTILITIES

The control of union terminal depot facilities is vested in the Interstate Commerce Commission.

Southern Pacific Company vs. Railroad Commission, 64 Cal. Dec. 557.

STREET LAWS

The municipal authorities have no power to extend the time for completion of the contract for street work, if the original time allowed has passed. Such extension must be made before the expiration of the time fixed in the contract.

Flinn vs. Schafter Realty Company, 65 Cal. Dec. 62.

A municipality has authority under the Improvement Act of 1913 to levy an assessment to pay damages caused to private property by the construction of a street tunnel.

Barber vs. City of Los Angeles, 65 Cal. Dec. 532.

Where several property owners join in an appeal to the council, there is no irregularity on the part of the council in proceeding to hear and determine an appeal of one property owner after denying the appeal of the others.

Ransom-Crumev vs. Thurber, 40 Cal. Dec. 61.

The right of an abutting owner be compensated for damage to his property by a change of grade is not affected by

(Continued on page 392)

PROGRESS IN STREET CLEANING

By D. S. Cole, Production Manager The Butler Manufacturing Co.

Comparatively little progress has been made in street cleaning methods for a number of years, and the great increase in the amount of high speed traffic has not only emphasized the unsolved nuisance of fine dust but has called attention, more forcibly, to the necessity of cleaning streets and highways efficiently and frequently of all manner of debris.

Clean streets are an asset to any community aside from sanitary considerations. The solution of the fine dust problem would add much to the happiness of home people and merchants who have been vexed with dusty establishments and the financial burden of combating dust which is blown about from the streets by every passing motor car and breeze.

Municipalities are spending huge sums in laying increased mileage of paved streets, a movement necessitated by the increase in motor traffic, which enhances property values and in general adds to the attractiveness and convenience of the city.

Clean streets are a civic necessity, and the problem is, how to clean safely, efficiently, economically, and in a sanitary manner the increasing amount of paved streets in every progressive community.

Two major methods have been offered recently in an attempt to handle the situation. First, flushers, using water under pressure to wash the streets. These machines are costly and simply wash the dirt into the gutters, catch basins and sewers which are expensive to clean. Water so used greatly reduces the useful life of pavements and cannot be used in cold weather. The method

is expensive and increases traffic hazards from wet streets.

Second, several rotary broom machines which sprinkle ahead of the brooms have been offered. These machines wet the fine dust and plaster it to the surface of pavements to dry and again blow about. They leave much to be desired.

The logical solution of the street cleaning problem, in all its various phases, seems to be the vacuum principle so successfully applied in the small home cleaners. The Butler Manufacturing Company of Cleveland, Ohio, have developed and offer a street sweeper which combines the scouring of a specially constructed rotary broom with the suction from a powerful fan. It is said that the Butler sweeper handles not only fine dust but heavier litter efficiently and economically on all classes of pavement.

This sweeper is being demonstrated daily on the streets of Cleveland. It embodies no untried mechanical principles or construction and is very simple in operation.

A motion picture film of the machine in operation was shown before the recent convention, held in Chicago, of the International Association of Street Sanitation Officials, where it was received with great enthusiasm. It has been endorsed the country over not only by engineers and street officials but by the medical profession.

It would seem that the eventual method of street cleaning is now available in a form fully developed and should receive the attention from those interested in street cleaning which such a progressive step towards cleaner and more dustless streets, so well merits.

MUNICIPAL DISTRIBUTION OF MILK

or Should Milk Be a Public Utility?

By Dr. C. L. Blake, Health Officer of Richmond.

I first want to thank our Executive Secretary, Mr. Locke, for giving me the problem of municipal government at this meeting. It is certainly a very great privilege to be able to present a paper before this convention of officials from cities all over this state, representatives and delegates from, indeed, almost every city in the state. I feel almost as if I were speaking to the radio, broad-casting over the entire State of California.

The published program of the convention will have indicated to you that I am to speak about the municipal distribution of milk, and from a new angle. You have probably never thought of the distribution of milk as a public affair before. It has always been in the hands of dairies and creameries, and as a municipal idea has not been under consideration. I do not wonder particularly at that, because at the last State election, municipal public utilities received such a knockout that one is almost afraid to say anything upon the subject. Still, I do not hesitate to present to you this somewhat novel idea of a public utility.

At first thought almost all city officials are prone to think that for a city to operate a creamery or to make milk a public utility is a foolish idea. When a new idea arrives we first laugh, then condemn and then adopt. Why should not a city have its own pasteurizing plant or why should milk not be a public utility? What is a public utility? A public utility? What is a public utility? A public utility is planned and formed for the express purpose of giving our citizens some commodity that is in common use by everybody at a cheaper rate

than any private individual, company or corporation can possibly give the same commodity. It should be operated not for a profit but to render service and in this particular case to give pure milk to our children and families.

That is why we have made a public utility of gas, electricity, hydro-electric power, water and even street cars. I think San Francisco is the only city in the country that has been able to keep its car fare down to five cents and that only because of municipal competition. Otherwise it would probably have been eight or ten cents. The people of that city have saved in car fare alone enough to pay part of their taxes.

It is also interesting to note the saving to the people of Los Angeles in water bills by having their own city water. They have converted that district into a veritable Garden of Eden and the residents have planted trees, flowers and vegetable gardens. Where the water is owned by private corporations it costs so much for water that people cannot afford to keep up a nice garden, much less have a vegetable patch, as it is cheaper to buy in the market than to try to raise anything yourself.

In recommending that the cities handle their own milk problems I do not mean for the cities to go out and own dairies and ranches, but to have their pasteurizing and distributing plant where the milk can be brought in by the producer, to be paid for not by the quantity but by the amount of butter fat present, thus encouraging the producer to produce better milk. The milk should be properly pasteurized, bottled and distributed under the observation

of a trained bacteriologist from the time it is received from the producer until it is delivered to the consumer. could guarantee milk of quality to every consumer in the city. At present, milk from the different creameries in any one city may run all the way from 3.0% or less in butter fat to perhaps 4.5%. Why is that? Milk normally from many cows is not likely to vary to that extent. People tell us the milk is watered or skimmed milk is added. It seems as though there must be some manipulation somewhere. Some say they cannot use cow's milk but are compelled to use canned milk.

The housewives all over the country are complaining about the high cost of milk. Perhaps they are right. creamery pays the producer 16 cents a gallon or 4 cents a quart and he sells it for 13 cents a quart, a difference of 9 cents a quart, 36 cents a gallon or \$360 per 1,000 gallons, which is the amount of milk consumed by a city of about 15,000 population. It does not cost any more to pasteurize 1,000 gallons of milk than it does 50 gallons. It all has to go through the same process. The milk should be heated to about 140 degrees and held there for not less than 25 minutes, then rapidly cooled and bottled. If the municipality did this we could pay the producer 20 cents a gallon for his milk and sell it to the consumer for not over 10 cents a quart, possibly 8 cents. We would then be accomplishing three great ends. would be giving the producer more for his product, would be able to sell better milk at less cost and thus encourage its use more than at present. and lastly we would guarantee pure, safe milk with no chance for epidemics of scarlet fever, typhoid fever, diphtheria or tuberculosis. Milk is the greatest food we have but the families

who need it most cannot afford it on account of the high price.

What is being done in the schools? They are getting up subscriptions from various clubs to give undernourished children only one pint of milk a day and they all pick up in weight, get stronger and keep tuberculosis away. Why can't they have it at home? It costs too much and that is just why milk should be a public utility. It would give everyone a chance to have all the milk they need. Milk is the greatest food and tissue builder we have and is the only food for children under one year of age. Why should not the city give it to them just as cheap as possible so that every child can have all they require. More milk would make better children, healthier men and women, and a healthier nation.

I would like to see every town and city have their own pasteurizing plant or municipal creamery. There should be one standard grade of milk and that should be the very best grade it is possible to obtain. It is utterly impossible to have only one grade of milk in a city where more than one creamery is operating, as they will vary all the way from 3.0% to 4.5% in butter fat. They all manage to keep just above the standard required by law and that standard is not very high. Of course I can readily understand that it would not be a good business to serve milk with 4% or 5% butter fat when the law only requires 3% and that is why so many people complain that the milk is watered. diluted with skim milk or not like the milk they used to get down on the farm. Certainly it is not and why should it be. The dairy is operated for a profit and why should they give better milk than the law requires.

Then another thing, milk is supposed to be sold the day it is pasteurized, but we have found some places that put a to-morrow's cap on to-day's milk so that when the consumer gets it he has milk that is about 48 hours old. No comments are necessary. Prevention is infinitely better than cure

Nearly all cities give a good deal of money towards hospitals, health centers, county and school nurses and other, agencies to cure disease. Why not begin at the very foundation and prevent disease, giving our babies and children the pure milk their bodies require, then perhaps we would not be in need of so many hospitals and clinics.

Both from a humanitarian as well as from a money-saving standpoint I cannot see any possible reason why every city should not own its own milk pasteurizing and distributing plants.

When a city or community has provided for itself a safe water supply, a clean pasteurized milk supply and an isolation hospital, then communicable diseases will become almost unknown. (Applause).

The President: The matter is now open for discussion.

Dr. Hall, Health Officer of Sacramento: I have not had any previous information in reference to this subject. Mr. President, and anything I may say, of course, has nothing to do with Dr. Blake personally, but I cannot quite agree with him in the ideas he has here expressed. He asks that we make of milk a public utility, as we do of gas and electricity, and it would seem that his principal reason for that is because milk is one of the best foods we have for everybody, especially for children under one year of age. I grant you that, but milk is only one type of food. Dr. Blake also tells you that in the different communities, the different distributing plants show variable food contents of the milk distributed from their individual plants. I can also tell you that, from a certified dairy, we will find, in various samples taken the same day, anywhere from 3% to 4½% of butter fat in the same milk. And why?

Now, it is no more easy to control the thing as a municipal affair, in reference to the food content, than it is for one large plant, a certified dairy, for instance, to control that content. And there is no use in trying to get the community to do it, because it won't do it. Pediatricians and children specialists would like to obtain a certain definite content, but if it is not obtainable by large communities, with large plants, it would be much more difficult in smaller plants, with less extensive equipment which the smaller town would have.

The doctor also told us that they have found pasteurized milk caps dated to-day placed on yesterday's milk. Probably the health officers and the dairy inspectors here to-day know that under the present law we are working under in the State of California, there is no such requirement. That was taken out of the law. It is not necessary to put the date of pasteurization on the cap of the bottle of milk you receive at the present time.

The question of watering milk and using skim milk is determined by bacteriological examination and analysis in the various health departments of the state. The control of milk as a food is accomplished in a greater degree than any other type of food that we eat or drink. Milk has more work done on it. there is a greater expenditure of money by the municipalities for the control of milk than there is in any other type of food you eat. At the present time, the police power is given the health department and health officers and dairy inspectors, which gives you absolute control of the type of milk you are to receive. The state law contains a valuable provision in the requirement that milk shall be served in the original bottle in which it came from the pasteurizing plant, in eating places. That assures you

the same type of milk in a public earing house that you get when it is delivered to your home from the dairy. However, you will always find the small town, the one without a dairy inspector, where they will serve you milk in any way they see fit to serve it.

The problem of the price of milk is apparently the only real big reason why it should be controlled. The competition that you have at the present time as between the different dairies, creameries, and distributors and pasteurizing plants in each community, keeps the price of milk as low as possible.

Those of you who have anything like municipal garbage collection or garbage control, are familiar with the fact that the people are constantly hitting you over the head with a gas pipe and telling you it costs more now than it did before when private concerns handled it, contrary to the statements made originally. That is what resulted in Sacramento, anyway. It really seems as if the price of milk is the only justifiable reason for any scheme for making milk a public utility. But if the distributor is getting too much for his milk and the producer is not, I fail to see how that is to be regulated by the municipality or anybody else. I don't see any big reason why milk should become a public utility. And I think most of you will agree with me.

Dr. Wing, Milk Inspector of Oakland: Speaking of the food content of milk, the difference in the different samples of milk and of those from the certified dairy that Dr. Blake spoke of, is probably due to the difference in the individual cows that give the milk. One string of cows, whether Durham or Jersey, may give you 4% or 4½%, and the next string, perhaps of Holsteins, would give you 2.9%. However, there are dairies that do standardize and put out milk with 4% fat. After all, the food content is not absolutely what the people

should be guided by in the consumption of milk. The protein content of the milk aside from the butter fat is just as important as is the butter fat when it comes to the consumption of the product.

Dr. Blake told us that the producers were receiving 16 cents a gallon for their milk. The dealer is paying 27 cents a gallon for his milk in Oakland and Richmond. The producer, it is true, receives about 16 cents for his milk. Some of the difference is made up in transportation to the city. The main portion of it is deducted by the association for overhead, surplus, and other items of expense that the association has. If the producer is not receiving enough for the milk, it isn't the fault of the dealer.

Dr. Blake says that one man can pasteurize 10,000 gallons as easily as he can 1,000. He can't do it. In the first place, it takes about 45 minutes to heat the milk, and about 60 minutes to bottle it. Just multiply that ten times, and remember that the ordinary milkman has a maximum of about 500-just multiply that ten times and see. Also, you have the breakage of bottles. I am not speaking for the dairyman now, but I want to put you right on a few facts. You have the loss of bottles. The average housewife will use a milk bottle to put her jams and jellies in, and you find them around the gasoline stations full of gasoline-gasoline and oil, and you find about 5% of them around the garbage dump, going into the ash barrels as breakage. There is a loss of money that way.

I am in perhaps a little different situation than some—some years ago I was a milk dealer myself. And I know that the loss of bottles is an important item in the distribution of milk. And that is a matter you have to consider for the distributor. And then there are

(Continued on page 389)

MUNICIPAL HARBORS

By BOYLE WORKMAN

The harbor of the City of Los Angeles was discovered during the year 1542. Two hundred years afterwards, or to be exact, in 1781, the City of Los Angeles was founded by the Mission Fathers.

When the gold discovery on the Pacific Coast turned the tide of emigration to California, Los Angeles was a mere pueblo; and at the location of the present harbor there was a Government Reservation of about forty acres in area.

Dana, in his "Two Years Before the Mast," describes it as a place where hides were rolled down the bluff and transferred by small boats to the vessels at anchorage in the bay.

The development of the harbor is the relation of a steady march of events that began with the building of one small pier, until the United States Army Engineers established the present harbor line in the year 1908. From this latter date the work of building the harbor has progressed steadily, and what the end will be no one can predict.

The present breakwater is over 11,000 feet long and was built by the United States Government at the cost of over three million dollars and contains 2,621,000 tons of rock obtained from San Bernardino County.

In 1913 the lighthouse was constructed at a cost of \$50,000. It stands 73 feet above low water level and has a light that is visible for a distance of fourteen or fifteen miles.

The United States Government placed its stamp of approval on the harbor by selecting Point Firmin for the erection of the defense works known as Fort McArthur, an area of one hundred acres.

There is also a Government Reservation of forty-one acres set aside by the early Mexican Government for public purposes.

Closely identified with the history of the progress of the harbor is the history of the incorporation and development of the harbor cities, San Pedro and Wilmington.

In the year 1906 the City of Los Angeles acquired a strip of land one-half mile wide by eighteen miles long, reaching to the city limits of Wilmington and San Pedro, as the first step toward the consolidation of the city with the rapidly growing harbor towns. The consolidation of these municipalities took place three vears later, and by this act the port was brought within the boundary and control of the greater municipality. At this point begins the real history of the development of the present harbor. One of the first steps was the relinquishment by the State of California to the City of Los Angeles of its control over the tidelands and swamplands about Thereby Los Angeles the harbor. became invested with power over the operation and development of the port, subject to the private interests represented by grants to individuals and corporations previous to the year 1908.

At the time Los Angeles assumed charge of the harbor the greatest depth was thirty feet, and there were 3,600 feet available for vessels of that draft. At the present time there is a frontage of 38,530 feet for vessels of thirty-foot draft. 9,680 feet for vessels of thirty-

three-foot draft, and 9,700 feet has a depth of thirty-five feet. The rest of the frontage varies from ten to twentyfive feet in depth.

It might be said that at the time of the consolidation the public owned 23% of the land, as compared with 71% at the present time. In the matter of harbor frontage 43% was municipally controlled, as compared with 87% at the present time. At the time of the consolidation the public owned none of the 18,755 feet of wharfage, although 6.000 feet of the wharfage was constructed on public lands. To-day, of the 34,832 feet of constructed wharves, the City of Los Angeles owns 16,748 feet. In addition thereto, 12,878 feet of privately built wharves will revert to public ownership upon the expiration of existing franchises and permits.

DEVELOPMENT

Little can be definitely stated as to the plans for future development. The Harbor Commission has, of course, certain definite plans covering prescribed areas. There is under consideration at the present time a plan whereby it is hoped, with the assistance of some of the foremost engineers and marine authorities in connection with the authorities of the Federal Government, to perfect a plan of construction that will cover the inner and outer harbor, embrace the extension of the present breakwater and provide for the development of the harbor for a period of at least twenty vears. In the meantime the work of development is progressing steadily. These plans embrace the reclamation of 850 acres of land located north and east of the West Basin: also certain acres of the East Basin and Terminal Island. The largest project under development at the present time is the widening of the main channel to one thousand feet. the dredging and construction of three large slips on the Terminal side of the channel, and the building of modern docks and wharves at the latter point.

CONSTRUCTION

The total cost of construction from 1909 to June 30, 1922 amounts in round figures to \$8,737,000. These figures do not include real estate valuations, properties built by lessees and being purchased by the city through deferred payments; nor do they include certain intangible assets that are bound to accrue, owing to new construction and development.

All the facilities that have been constructed and are controlled by the City of Los Angeles have been of a very substantial character. They conform in type to those commonly used in other ports, but there has been a constant endeavor to build attractively, so that the eye may be pleased, while at the same time the public may be served.

The majority of the wharf construction is on a creosote pile foundation, with substantial floor systems, with white cedar decking. In other places reinforced concrete piles are surmounted by reinforced concrete deck systems. The wharves are surmounted by transit sheds of modern type, constructed of steel, timber and concrete, with fire-proof walls. The matter of increasing the capacity of the water frontage by the construction of additional stories to these sheds, and the erection of freight handling devices, is receiving the careful consideration of the Engineering Department at the present time.

The whole plan of development, while it has not, as we have before said, been definitely determined, tends toward the construction of a harbor that will be second to none in the world, and will provide for the commercial needs of a city of two million inhabitants and the

(Continued on page 397)

ACCOUNTING SYSTEMS FOR MUNICIPALLY-OWNED UTILITIES

By GEORGE H. WOOD, Controller of Accounts, City of Pasadena, Calif.

The Uniform Classification of Accounts for electric and water corporations, as prescribed by the Railroad Commission of the State of California, is in general use by municipal light and water utilities throughout this state.

It is obvious that, in order to make comparison between the financial transactions of any two or more organizations. the figures must be reduced to a common factor and that the same group of expense or revenue items shall be identical in classification. Section 48 of the Laws of 1911, known as the Public Utilities Act, in effect March 23rd, 1912, provides that the Railroad Commission shall have power to establish a system of accounts to be kept by all public utilities subject to its jurisdiction. In conformity with the provisions of this section the Railroad Commission has prescribed a uniform classification of accounts for electric corporations, water corporations and gas corporations.

Corporations may extend the divisions of any or all of the accounts shown therein, in order to meet their individual requirements, provided that the integrity of the accounts is not impaired and that the title and purpose of any accounts so raised shall first be filed with the Railroad Commission. Under this plan the Railroad Commission is at all times in a position to know the existing needs of the various corporations and to modify the procedure when necessary.

In view of the fact that the majority of municipally-owned utilities actually show a surplus when their accounts are maintained on the same classification as that of the privately-owned utilities, namely, the uniform system outlined by the Railroad Commission; and also that, upon careful investigation and report of reliable auditors these figures are proven to be true and correct; the statement that the low rates of municipally-owned utilities are obtained through manipulation of accounts and transfer of funds must be incorrect.

There are other reasons for the low rates of municipally-owned utilities, a few of which I will mention before taking up the various methods of handling the detailed accounting. For example, to start a public utility one must have cash. This is generally obtained through the floating of bonds. The interest rate for municipal bonds, varies from 4 to 5 per cent, whereas the interest rate on bonds of privately-owned utilities ranges from 6 to 8 per cent. Municipal bonds are generally retired serially so that interest payments are reduced every year, whereas corporation bonds are not retired until the end of the term and even then it is customary to issue new bonds to refund the ones which then expire-the privately-owned utilities, therefore, paying from 6 to 8 per cent on the total bonded indebtedness for the full life of the bonds.

Municipal utilities are also relieved of state taxes which are 7½ per cent of the gross receipts of the corporations; federal taxes, which are 10 per cent of the net receipts in 1921-22, and the state capital stock tax of \$1.00 per share on the market value on the stock issued. If the Pasadena Municipal Light Department had been compelled

to pay these taxes on the business of last fiscal year it would have paid \$87,767.61, instead, we were able to use this amount for additions to the system. Municipalities are not required to pay cash dividends to their stock-holders but, instead, the citizens receive lower rates, or the surplus is either expended on the duration of new assets represented by additional equipment or the surplus is placed in reserve to meet contingencies.

Generally speaking, the municipallyowned utility operates with one main office only and is not required to maintain central and branch offices, thereby effecting a saving in overhead expenses. Again the municipal utility is seldom required to supply rural districts, which in the majority of cases are not productive of large profits. municipal utilities do share with privately-owned utilities the burden of growth in the communities served and when a municipality requires cash for extension of its system in excess of accumulated surplus from earnings a vote of two-thirds of its citizens must be obtained before bonds can be issued.

In February, 1922, Price-Waterhouse & Company made a report on the audit of accounts of the Bureau of Power and Light of the City of Los Angeles, in which it was clearly shown that the earnings of the Bureau for the period June 30th, 1921, as a whole, were sufficient to meet both reasonable depreciation and annual bond redemption after covering all other operating expenses, thus proving on reliable authority that the low rate was not due to manipulation or transfer of funds.

The general classification of accounts, as prescribed by the Railroad Commission, provides for the maintenance of balance sheet accounts setting forth the assets and liabilities of the utility, dividing the same between fixed capital

and tangible capital and in the case of the electric corporations these capital accounts are further divided into production capital, transmission and distribution capital and general capital. The income accounts are subdivided into the various sources of income and the expense accounts are grouped under the headings: Production expenses, transmission expenses, distribution expenses, commercial expenses general and miscellaneous expenses, taxes, depreciation, Provision is made for clearing accounts of stable and garage expense. shop expense, supply, tool and engineering expense, etc., a complete description of which is to be found in the uniform classification of accounts prescribed by the Railroad Commission of the State of California, which can be obtained from the State Printing Office.

The accounting for any public utility necessarily involves considerable routine and detail work, as the greater percentage of charges are small and affect practically every householder in the community.

The enterprising municipality avails itself of every mechanical convenience within its reach for the accomplishment of this purpose at a minimum cost.

The basis of charge to consumers is from the meter readings. In some communities the light and water meters are read by the same man, but in the majority of cases separate readers are used on account of the difference in location.

It might be interesting to this convention for me to outline, briefly, the method of billing and accounting followed by the Municipal Light and Power and Water Departments of the City of Pasaslena.

The meter reader is provided with a loose-leaf meter book, in which is entered the date and meter reading. It is his duty also to extend the difference between the present and previous reading,

thus giving him an immediate check on his work, as, in case of wide variance in the consumption he would immediately check his reading. Upon completion of a meter book it is turned in to the billing department where the clerk prepares the bill with cashier's stub attached on the Burroughs Adding Machine. By this machine the dates and readings are listed and the difference automatically figured and the amount of charge is obtained from the rate chart and inserted on the machine. The hiller checks the consumption shown by the adding machine against the amount shown on the meter book and notes differences, if any. The meter book is then handed to the ledger poster who enters on a loose-leaf sheet, by means of the Burroughs machine, the last meter reading, date, consumption and amount of charge-the consumption being obtained from the figures shown on the meter book, these having already been checked by the biller. As the ledger passes through the Burroughs machine. the amount posted is automatically recorded on a strip showing consumption and amount, light and power being segregated. The customers ledger sheets are contained in travs or boxes, the sheets being filed by districts, meter books, streets and house number. Each street is numbered and this code number together with house number is stencilled on all bills. After posting the ledger, the biller and ledger keeper compare the bills with the adding machine tape, thereby giving an immediate check on the accuracy of both operators and establishing a correct total to be transferred to the bookkeeper. At the time of checking this strip the house number is placed alongside the amount to be used in checking the balance at a later period. This strip is then inserted in an envelope, the totals being entered on the face of the envelope. Concurrently with the checking between the biller and the ledger poster, any delinquencies shown on the ledger are added to the bills before being mailed. As the light and water bills for each district are prepared the same day, the light and water bill for each consumer is mailed in one envelope.

Payment of light and water bills is made through the regular cashiers who handle all moneys coming into the city treasury, including taxes, licenses and miscellaneous bills. This work is all performed by two cashiers, whose net combined average and shortage for last fiscal year was less than \$12.00.

The light and water stubs are segregated according to division, meter book, street and house number and the daily recapitulation of these is forwarded to the utilities departments along with the stubs for posting. These cash credits are posted to the ledger by stamping the date paid opposite the amount of the charge.

Practically 95 per cent of the accounts are paid in full, but in case of a partial payment or over-payment the difference is recorded in ink.

Interim bills, divisional transfers, credit memos, refunds, etc., are details which have been worked out satisfactorily, but time will not permit me to discuss these now.

The balancing of the consumers' ledgers is continuous, a recapitulation being made of the outstanding items and this is proven against the controlling accounts which are posted daily from the report envelopes containing charge records and also from the daily recapitulation of receipts.

The method of ledger posting employed by the Bureau of Power and Light of Los Angeles is similar to that in use in Pasadena with this exception, however, that on the ledger sheet the previous as well as the present meter reading is

shown, and the cash is posted on the Burroughs machine. The total postings for each division are taken from the machine and recapitulated on a book control sheet. These postings are checked daily against the cashier's report of collections.

In the City of Glendale the billing and posting and preparation of control sheet is performed on an Elliott-Fisher machine in one operation. In this city the light and water meter readings are shown on the same sheet and the total of the two shown on the bill, making it impracticable to separate cash receipts from light and water.

It is necessary in some instances to send out collectors, for example, to the sick and the aged and other places where the wife cannot leave home and the husband doesn't return to the city in time to pay the bills. The collection clerk enters the record of bills to be collected upon a small card for use by the collector. If uncollected or to be placed for future reference the card is returned and filed. Accounts for uncollectible items are filed in the Kardex file for ready reference. In the last fiscal year we only had to write off for bad debts less than 1–10 of 1% of the revenue.

Stores accounting for municipal utilities can be handled upon the same basis as for any public utility or organization. The storekeeper must be as careful and methodical as a bank cashier because he is responsible for goods representing a large amount of cash.

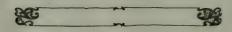
The workmen to whom these goods are delivered must turn in proper records

on their job orders the use of all materials placed in their possession. These orders representing material used should be coded so that when the information reaches the bookkeeper the correct expense accounts are charged.

It is vitally important that complete and accurate record of all properties be properly recorded and that these are in agreement with the control ledger. The property records can be posted from completed job orders, or, in the case of the purchase of lands, buildings, or vehicles, the posting to the property record can be made directly from the invoice. In the case of water mains, gas mains, or electric light lines, the engineer's maps should be in agreement with the property record. This, however, applies to quantities only as it is not expected that the Engineering Department would maintain costs independent from the accounting division.

In conclusion, the municipalities of California are greatly benefited by the adoption of the Uniform Classification of Accounts as prescribed by the Railroad Commission which enables them to make comparisons with other similar utilities and forms a basis for practical accounting systems.

Comparison with the activities of other cities is one of the great advantages afforded by the conventions of the League of California Municipalities which enable an interchange of ideas between the municipal officers of the entire State of California, leading to successful municipal management, operation and accounting.



Tree Planting and its Relation to Municipal Progress

By W. R. MITCHELL of Los Angeles.

We have just listened to a most interesting discussion of one phase of the relation or possible relation between municipal government and those things which affect our daily lives. I would now like to discuss with you the relation of tree planting to municipal progress.

Show me the man or woman who loves the tree, and I will show you a real man or woman. What a wonderful poem is the tree! I would like to have you become interested with me in having beautiful parks in our cities. Why should we not have them? There are no cities in the country that can compare with the cities of California for an all-the-year-round life of the trees and shrubs in our parks. So that we in California can gain a very great deal by the proper care of our trees, and their propagation in our parks and in our streets.

The tree has a tremendous effect upon the life of the community. If you will but think of different communities that you each know, some of them in which the tree is favored and cared for, and others in which no particular thought seems to be given it, you will at once realize this fact. Great strides have been made in many parts of the country in the care and growth of ornamental trees. And this means care in the soil, the irrigation, the drainage. Above all, it means a knowledge on the part of him who is to take care of the trees and the shrub, how it lives and how best it thrives.

Trees should be studied as to their habits, and particularly as to their habitat. It is as important to know what a tree should have for dinner, as it is what a human being should have for dinner. Take the homely alfalfa, and how many men know how best it grows. I remember once going to an alfalfa field, and I told them I would just like to see some of the things on the roots of the alfalfa, and so I put three fellows digging. Those men learned more in an hour that day about how to grow alfalfa than they had ever known. It is important to know the chemistry of the soil, so that we may have the right soil for given trees. There has been a very great development in that direction and to-day the chemistry of plant life, the chemistry of soil, the physics of soil are sciences that are being pursued, as they should.

I want to be brief this morning, and just bring out a point or two. I want to ask, too, whether you officials are alive to the wonderful advantages of trees in your parks and along your streets? And if you are, are you likewise alive to the necessity of a very careful study of the whole subject of tree life, in order to get the best out of your efforts? We are not utilizing, as I see it, the possibilities of the treatment of tree life in our cities in California. And in any consideration of the subject, we must come back again to the matter of the necessity of a knowledge of plant life. We must remember that the roots must breathe as well as the shoots. They inhale oxygen. And we must pay attention to the surroundings of the roots as well as the surroundings of the shoots. And, on the other hand, so far as the shoots are concerned, are you going to plant your trees so close together that they cannot get the necessary sunshine?

The physiology of the tree is a most interesting study, and if I can inducy you to take it up, I shall be gratified. You must remember, for instance, that plants get water only by their roots; they lose much by their shoots. So all the surface sprinkling on the dirt or even on the lawns is not the right way. And, of course, the physiology of all plants is not alike. I am reminded there that the most important root of all is the one which is responsive to the earth below, it is the primary root. The other roots never take its place successfully.

So, just as we have been learning to give proper care to the children, in order that we might have better men and women physically, so we must care for the trees, to the end that we may have better trees, trees adapted to their soil environment and their other environments for the future—that is the character of people we should be. And as we are asked, in the language of the poet, to lend a hand to humanity, so let it be with our tree life.

Discussion:

Councilman Turner of Sacramento:
I had two and a half years' experience
on the Park Board in Sacramento, and
incidentally being pictured as a butcher
of trees, I would like to inquire whether
Mr. Mitchell thinks it good policy to
thin out standing trees, in such a case
as where elms have been planted 16 or 18
feet apart—as was the case with us—
to take out every other tree, and in
that way give the other trees a greater
space?

Mr. Mitchell: Surely.

And when the trees have attained any age, as I imagine yours have, the sooner you do it, the better.

Mr. Graves of Hanford: Do you think it good policy, Mr. Mitchell, to plant trees in the parking space between the curb and the sidewalk? The City Engineer of our city strongly recommends against it, and is urging people wherever possible to eliminate those trees and to plant trees along the property line. That tends to widen the appearance of the street and prevents the tearing up of the sidewalk, and particularly the streets themselves, in the matter of concrete.

Mr. Mitchell: In several cities of the East, they have done just that thing. I think it an excellent idea. In that connection it would be my suggestion that you have demonstrations of the plan here and there, and call attention to them. I really think we should have our trees on the property owner's property, so that the property owner will take an interest in them.

Major Kirkbride of San Mateo: If you have no authority over the private property, as you have not, then will you not have the difficulty of one property owner planting one kind of tree and the next property owner another kind of tree, and there will be no uniformity? We have been told it is advisable to have some uniformity in the trees on individual streets. But supervision of the trees to be planted would be entirely taken from the municipality in such a case, and the result would be, as I view it, that you would have no real parking effect at all.

Mr. Mitchell: That is an excellent point to raise, but you know the zoning system is an after growth, it is not the beginning, and with that idea in mind, you have to take things as they are. My suggestion is, if you have someone to look to it with that kind of authority, you are going to have demonstration over a city out in our parks—considerable space where we are going to have the matter exemplified. Somebody has got to have a right over us to look after the beautification of the city. But I say again, I think you should

(Continued on page 193)

The Test Highway at Pittsburgh, California

By LLOYD ALDRICH

Highway Engineer in charge of construction.

After giving you a brief synopsis of the Pittsburgh test highway and matters leading up to it, how it came about, and so on, I shall give you motion pictures illustrative of the traffic tests there made.

The test highway at Pittsburgh was inaugurated by the Columbia Steel Company early in 1921. Their idea in the very beginning was to create a new market for a special reinforcing bar which they hoped to manufacture. They planned to build a short section of pavement, including only sections of pavement with reinforcing in them, and naturally they thought, by subjecting the roadway to traffic, to show which one of the types would prove the best under the conditions. The layout was not acceptable from the standpoint of engineering, and after discussing the problem with them, it was decided that not only their ideas, but the ideas of all engaged in highway construction should be embodied in this road test.

The manner of obtaining the ideas of the various engineers constructing the highways was through a questionnaire, which was mailed to everyone in California whom we knew to be interested in highways and the design of pavement. We received answers to those questionnaires, some 150 answers, as to their ideas of what should be included in the test. There were a great many duplications, but there was one outstanding point in all, and that was that the opinion was unanimous in wanting the test highway constructed on black adobe soil, which we finally did.

Evolved from these questionnaires were 13 different types of concrete

pavement, that is Portland cement concrete, and some of those were reinforced, and some were plain. The site for the test highway was adjacent to the town of Pittsburgh, on account of the black adobe soil, and we started construction in May, 1921, and the road was completed the latter part of July of the same year.

Our idea in the matter of having a proper comparison in that number of types of pavement was to have them laid on a subgrade which was as nearly uniform as we could make it. For that reason, we exercised great care in making it uniform in its entire length. We built the subgrade on a gentle slope to the north, and for that reason it would have made the south side of the track in excavation and the north side in fill. So we took the material out of the south side to a depth of approximately three feet below the finished subgrade elevation, and then put that dirt back in afterwards, treating it evenly for the entire length of the track. The dirt was placed back in layers of approximately 9 inches, and then it was thoroughly pulverized, there were no lumps left in it larger than two inches greatest diameter and that was worked over with the ordinary disk in the beginning, followed by the straight-toothed harrow and Johnson scarifier. When that was thoroughly pulverized, we put water over it for the entire length of it. This water was not sufficient to make the soil even damp, that is, it didn't appear to be damp, but we got on it a twelveton, three-foot road roller and rolled it. and levelled it in the weak spots with new material. After that material was in, it was scarified to a depth of about two and a half inches, preparatory to placing the next layer of loose dirt upon it. The process was repeated until we had about six layers of that material packed in that manner. But our idea was only to make it uniform.

The results, finally, through the test, showed us that we had learned a great deal in the preparation of the heavy soils, namely, by that process, that soil was made impervious to water-the very thing that we all have been wishing for, but have not been able to establish heretofore. With the water standing in the side ditches, as you will later see in the picture, for a period of four months, and in some cases with the water as high as the level of the pavement, on the inside and outside of the test track, that water did not penetrate laterally more than a foot and a half at any point, and the moisture content of that subgrade through the entire period of our tests did not vary in any spot more than 15%, and in no case did we have any portion of the concrete so saturated that it lost its bearing power.

This brings us to this idea now—of course we would like to see it continued further out in actual practice on our highways, but it does look as though it is necessary to haul in additional material and mix with our heavy soils, in order to test the swelling and shrinking action of the adobe. You can treat it, as I have just described, at a very nominal additional cost over what we are under now, and if you can get as good results or better in that manner, it looks as though it is the thing to do.

I will say that, in fact, the subgrade that we had there was as good a subgrade as I have ever seen under any pavement, and for that reason I personally would quite as soon build a road on black, heavy adobe, as a subgrade, as on any soil I know of, providing I could do it in the summer time.

We started our traffic on the 9th of November, 1921, after the pavement had been cured thoroughly, and we started with two lines of travel.

I might say, as I have got a little ahead of my story, that we secured the trucks for this traffic test from the United States Bureau of Public Roads and the California Highway Commission. We secured 40 trucks. Most of the trucks were 31/2-ton trucks, a very few being 5-ton trucks. They were all loaded with pig iron, so the gross weight on the four wheels was 71/4 tons on the start of the test. This loading was gradually increased from time to time, until the loads, during the remainder of our tests were 23,800 pounds on the four wheels, which was the maximum allowed under the State law.

However, we took a great many tests of different types of motor vehicles, including almost every known make of truck and tractor, and both two and four-wheel trailers, in single trailers and in combinations of three and four: also various types of automobiles, touring cars, auto stages, purely to gather the information necessary to treat of the regulation of traffic on our highways. There were so many things that we learned regarding the various vehicles and their effect on the pavements, that it would take me from now until tomorrow to give you the detail of it. So I won't burden you with that. But, as you see the pictures, you will realize something of it, and, after they are shown, if there are any questions that any of you would like to ask, I would be glad to attempt to answer them.

(Moving pictures shown.)

I want to say that the traffic completely destroyed four of the sections by the end of January, 1922. The pavement got so badly broken that we finally had to discontinue the traffic when the weather permitted, and completely repaired all the broken area. We started the traffic again the last of May, 1922, with the two lines of traffic as in the beginning, and continued that way until the last of July, 1922, and those four sections which originally went out disintegrated again, that is, the portions that were not repaired. Then, due to the fact that we could not have any effect on the other nine sections, we decided to put on a final test there in the form of traffic that would break them up. That is to say, this traffic having no effect on those nine sections. and it being very expensive to run the test-our expenses then running from four to five hundred dollars a day-we decided that the best thing to do would be to get a load sufficiently heavy to simply make a short job of it. So we found a two-wheeled trailer and it was said that it had a rated capacity of 50 tons on the two wheels, which sounded all right. We took it up there and we connected it up to an ordinary 31/2-ton truck, and put a 15-ton load on it. We went around the track with no trouble at all. I might say that the tires were ten inches in width, steel tires on solid wood wheels. The steel tires started to cause abrasion on the surface of the concrete. Up to that time, there had been no surface wear whatever under the rubber tired traffic. But these steel tires with the 15-ton load did start abrasion. So we jumped the load to 30 tons, and when we got through 30 tons on the two wheels, it started to go through those same four sections in places. In the meantime, we were having no effect on the other nine sections. Finally we boosted it up to 50-ton load on the two wheels, which gave a concentrated load of 5,000 pounds per square inch, against a maximum of 750 pounds per square inch under the State law. It required five trucks and two tractors to pull the thing in those weaker sections. There was one section, a five-inch section that the 50-ton load went through like a piece of cheese. one of the nine. The other eight sections were not affected in any manner by this 50-ton load. It was rather interesting, because in the five-inch pavements, with the exception of one, they did not withstand this load-one of the five-inch pavements withstood it very well. But with the others, so long as you could keep the load moving, it would roll through all right. But if you broke a cable or anything for a minute, the load would settle right through it, clear down to the subgrade. That, however, was a test which of course we never expect on any of our highways. But it does show that the remaining eight sections were entirely capable of resisting such a concentrated load.

Question: May I ask as to the comparative cost between the sections which broke down and the ones that stood up?

Mr. Aldrich: I will take the cheapest section that did stand, compared to the cheapest one that did not. The one that did stand cost approximately 15% more. In other words, that is not a vital point. You must, of course, from the very beginning, take into consideration the preparation of a sub-grade. When that is done, and the sub-grade is properly built, you can design a pavement for a very slight additional cost over present cost and yet you will find that it will last you many times longer.

Question: Were all of the nine sec-

Mr. Aldrich: No, they were not. There were four sections of plain concrete.

Question: I would like to ask the gentleman what conclusion he came to as to the value of reinforcing?

Mr. Aldrich: We came to this conclusion regarding the value of reinforcing, that we have no section in the test with the proper amount or proper placing of steel but that, with the proper placing of steel, using a considerably less amount than we used in the heavy sections, it would be superior to any section in the pavement. In other words, there is a great deal of value in the reinforcing, but it must be properly utilized.

Question: I would like to ask if, as a result of this test, the State Highway Commission is in a position to recommend a type of pavement and reinforcement for a given class of service?

Mr. Aldrich: Yes. I would say that anyone can avail himself of that information, and will be in a position to design a proper pavement, using that material.

Question: What thickness of pavement was it that had the 8-inch anchors on the side, and what benefits were derived from that method of paving?

Mr. Aldrich: We had two 8-inch pavements with the inverted curbs on theedges, and one was divided in the middle and one was not. Which do you mean?

Question: The one with just the two outer edges—how did that stand up?

Mr. Aldrich: That did not have the merit that we expected. The two inverted curbs in the monolithic slab evidently tended to anchor it too much. It developed a longitudinal crack for its entire length.

Question: How did the six-inch pavements hold up?

Mr. Aldrich: The six-inch pavements with the eight-inch edge?

Question: Yes.

Mr. Aldrich: They ranked number one in total credits.

Question: And what did you consider the proper placing and the proper percentage of reinforcement?

Mr. Aldrich: I am afraid I can't tell you that offhand. I will tell you approximately, based on our observations. We used that same shape as Section I, with a thickened edge running a six-inch slab to a nine-inch edgeif you used a five-inch, it would be an eight-inch edge tapering the additional distance, two feet from the edge. In that we recommend the placing of transverse steel on approximately eight-inch centers on top and six-inch centers on the bottom, alternating with every other bar, and stopping 18 inches from the edge. We also would increase the longitudinal steel, and I might say that we had no sections with longitudinal steel in, only as tie-bars on the edges-we would increase that with nine longitudinal bars, connected with five on either edge, three on top and two on the bottom. That would make ten. That is just an idea-I could sketch it out to you, however.

Question: Did you form any conclusion, or attempt to form any conclusion as to the desirability of having a surface coat, an asphaltic coat, or wasn't the test designed for that?

Mr. Aldrich: No, it was not designed for that.

Question: Can you give any idea as to when you expect to take a test with asphaltic cement?

Mr. Aldrich: I have the plans ready, and nine months ago they were approved by Washington, for continuing the tests. The only thing remaining at the present time for carrying on another series of tests, is to have a trade comparison between black and white pavements, similar to those of the California Highway Commission, because the government can only contribute through the Highway Commission.

Question: Has the State Highway Commission made any change in their standard design because of these tests and since these tests were made?

Mr. Aldrich: There have been a few changes. They have laid this one section in some localities since the tests were made. It is rather interesting to know that they carried on their plans for this particular section eight or nine years ago, but, so far as I know, they didn't complete it. It was first used extensively by Maricopa County, Arizona.

Question: Did the longitudinal crack develop when the Arizona section, socalled, started to thicken?

Mr. Aldrich: It did not. There is where we would look for it, but there was not a longitudinal crack in that pavement at that point in any place.

Question: Those tests seem to have been made of a thickness which carries a very excessive load of those which failed. Of course, where there is a lighter class of traffic, where the pavement would not be subjected to such heavy traffic, it might naturally be made lighter.

Mr. Aldrich: Yes. No tests have been made on any pavement thinner than five inches, to my knowledge—that is, no traffic tests.

Question: If you take the cost of your reinforcing, and applied it to increasing the thickness of a non-reinforced slab, what would be the comparative strength?

Did you make any comparative study of non-reinforced and reinforced slabs, on a cost basis?

Mr. Aldrich: In other words, you mean instead of putting the extra cost into steel, put it into concrete?

Question: Yes.

Mr. Aldrich: The only comparison that we have on that which is a direct one, is a five-inch slab reinforced. The state has been using reinforcing, 3/8-inch bars on 18-inch centers, placed in the middle of the pavement, as against a five-inch slab reinforced top and bottom. In such a case, you will readily see that the one reinforced, as I have described it, in the center of the slab, has no effect as a reinforced pavement whatsoever. It acts as a plain concrete. In the comparison of those two, one with the additional reinforcing, as given, in terms of tonnage, ten times the service right now as the other one. The difference in cost is about 12%.

Question: Could you give us references? Have these tests been written up? Mr. Aldrich: Yes, regarding the final reports on the tests, they were off the press, and I would like to say to all of you or any of you who are sufficiently interested that if you will give me your names and addresses, I will see to it

that you get copies of the report.

HUMILIATING AMERICAN FIRE RECORD

American fire losses after the war, began to elimb with astonishing rapidity toward the half-billion mark. Last year they reached this point—reached it and kept on soaring until they registered a total of \$521,860,000. For \$321,860,000 is the estimate, made by the Actuarial Bureau of the National Board of Fire Underwirters, of the 1922 aggregate.

This sum, as retiring President John B. Morton reminded those in attendance at the fifty-seventh annual meeting of the Board, rises far above even the total for 1906, when was swollen abnormally by the burning of San Francisco. It represents the largest fire loss ever recorded by any nation for a single twelve-month. Moreover, no great conflagration contributed to this total.

What, then, will account for this mon-

strous figure? Are there in operation any laws, natural or economic, which tend to make this mounting fire loss uncontrollable? Inflated property values have played a part in raising the total; likewise, the congestion of population in a comparatively small number of cities. But losses by fire have greatly outstipped the growth of population. In 1912, for example, the United States Census Bureau reported a total population of 94,410,503, and the per capita fire destruction was \$2.16. By 1922, a decade later, the population had increased but 15 per cent, while the average individual share in the burning toll amounted to \$4.75—a jump of 120 per cent. The contrast between this figure and that recorded for Great Britain during the same year—72 cents—is shameful.

Inescapable, therefore, is the conclusion that the largest part of this humiliating

American fire record in 1922 was the product of public carclessness. Carclessness in America is on a gigantic scale, a scale such as could obtain only in a country where the memory of days of abundance still is vivid—much too vivid, also, for our immediate and future good tour vision mistakes a shade for something palpable. But in Great Britain and throughout Europe generally, the days of plenty are remote; they departed so long ago that even the tradition of them is misty, is almost forgotten. Loss of natural resources is of course a deplorable thing; still, it is not without

compensation, for protection of any kind of property against waste by fire has become, in those lands, a settled rule of conduct to which is born each succeeding generation. Every man feels himself to be the guardian of what remains. So it must become in America; and it will, inevitably.

Dismal the present situation appears, but there is not a little encouragement in the certain knowledge that, without the vigorous fire prevention effort of recent years, the 1922 exhibit would have been worse than it was worse by many millions of dollars.

Cheap Electricity as a Population Builder

By H. A. P.

How does your city stack up in the way of rates on this essential factor of modern industry and home life? Imagine the constructive and community building power of an "ad" such as the City of Toronto, Canada, can use to-day, like this:

Buy a Home in Toronto Do Your Housework with Electricity

One Cent Will Run an Electric

IRON 1 HOUR
WASHING MACHINE 2 HOURS
VACUUM SWEEPER 3 HOURS
Cooking Rate: nine-tenths of 1c
per K. W.

House Lighting: 2.2c per K. W. Rates Are Going Down Every Year.

COME TO TORONTO, CITY OF EFFICIENCY

Judson King, of Washington, D. C., in an article in the Illinois Municipal Review of September-October, writing on the wonderful strides in the development of hydro-electric power in Canada says in part, as follows:

The Canadians are doing it. The Hamilton, Ontario, Spectator on September last issued an enormous special edition cracking up "Hydro" and carrying "ads" from cities and towns over

Eastern Ontario boasting about low power rates to trap manufacturers; cheap "domestic" and "commercial" rates to lure business men and home seekers. They brag about "dependability" of service; that rates are not "jumped." AND THEY MAKE GOOD. Distressing, but true. Ontario is growing in population and manufacturing. Hydro bonds are top-notch on the New York stock exchange. Business men, big and little, are solidly back of the system. promoters who had the vision and courage to start it are popular captains of industry, needing no detectives to guard them.

Will the cities of California lag behind in the municipal development of this powerful factor in modern life, hydroelectric power?

The City of Los Angeles furnishes us with a close-to-home example of what cheap power and water can do for a city. San Francisco now has at least one foot on the highway of accomplishment in this direction and will soon be making great strides to catch up with her rival city of the Southland, provided, of course, that she does not become mired in the bog of private power corporation intrigue.

We cannot blink at the growing modern trend towards the eventuality of complete municipal ownership and control of this utility. Let us not lag helpind the times.

THE <u>BUTLER</u> VACUUM

STREET SWEEPER



The vacuum principle combined with a specially constructed segmental broom insures efficiency of cleaning never before attained. The BUTLER cleans the pavement thoroughly whether it be asphalt, brick, concrete, stone or wood block. All manner of debris is picked up and REMOVED including fine dust and heavy litter. The BUTLER is simple in operation, rugged in construction and embodies no untried mechanical principles or units. It institutes the most economical and sanitary method of street cleaning ever developed.

The BUTLER is a civic necessity. Awarded two medals of honor at the San Francisco Exposition.

Write for detailed information.

THE BUTLER MANUFACTURING CO.

General Offices: 12411 St. Clair Ave., Cleveland, Ohio





McAdam Street, Oakland, California, looking West Suchloada as shown in this picture are the common traffic

16,000,000 Tons — Over Resurfaced Pavement Prove Durability of Asphaltic Concrete

Resurfaced in 1914 with only 2½ inches to three inches of asphaltic concrete on an old oil-macadam base, McAdam Street, Oakland, California, has carried over 16,000,000 tons of traffic in the last nine years—and it is still in excellent condition, without having incurred any maintenance cost.

Similar cases throughout the Pacific Coast States have convinced experienced highway engineers that durable asphaltic concrete is the most desirable type of material for resurfacing old pavements, as well as for the construction of entirely new pavements. '

It has been conservatively estimated that from \$5000 to \$10,000 per mile can be saved by resurfacing worn-out pavements in place of laying wholly new construction. Resurfaced with asphalic concrete, the permanence of the new pavement is assured, for amphalic concrete is adhesive, insuring a thorough bond with the old base—waterproof, preventing seepage to the subgrade—ahoke absorbing, tending to protect the base against the force of impact—and it is durable.

STANDARD OIL COMPANY

ASPHALTIC CONCRETE for durability

CALOL ASPHALT for BEST RESULTS

(Continued from page 372)

other things to be taken into consideration in the cost of distribution, besides, and it requires a very, very careful study and a whole lot of work before a person is entitled to reach a conclusion.

Mr. Norman F., Malcolm, City Attorney of Palo Alto: I am not a doctor. nor am I a health officer, but just an attorney. The paper that Dr. Blake read a few minutes ago was quite startling, perhaps, to most of us, in this, that it threw out the suggestion to us that we think about the municipal ownership of a food product-milk. I believe there is a great deal in this. I am not looking at it from a dairyman's standpoint. I am not looking at it from a physician's standpoint, nor am I looking at it from a health officer's standpoint, but I am looking at it from a business man's standpoint. We know what the cost of milk is. We know the cost of taxation in this state for the inspection of dairies and for the inspection of milk, and we find it is a vast sum of money. So I merely venture to say that there is more in this municipal ownership suggestion than we have been thinking about, and that there may be a large saving of money in the municipal ownership of milk. And why not? We are doing these things with other municipal ownerships, and why not do it with milk, and perhaps save a large amount of money to our citizens? I say to you that there is no milkman, no dairyman who would dare to bring impure milk or milk with water in it to a municipal plant where it was being pasteurized. And I repeat, I believe that we would save money by it.

City Manager Ashburner of Stockton: The question of making a public utility out of milk seems to me to be leading in the general direction of making public utilities out of beef and groceries and other foods, as well as shoes, books and clothing. I do not agree with the gentleman who has just spoken. It seems to me there must be some limit, because a city can no more go into the distribution of milk without an additional expense to the taxpayers, than it can go into the inspection that has been spoken of as to cost. In my opinion, the great loss in the handling of milk to consumer lies in the fact that you will find on every route three and four wagons delivering milk, even on the same block. You will sometimes find four or five wagons delivering milk at the same apartment house door. It is a reckless expenditure in the delivery of the goods to the people that is costing us the money. If we had a large distributing company in each community, we would



GLADDING, MCBEAN & CO.

USE PERMANENT PIPE FOR IRRIGATION DRAINAGE CULVERTS SEWERAGE

CROCKER BLDG. - SAN FRANCISCO WORKS-LINCOLN.CAL. find that our cost of milk would be reduced. I think there is too much of a tendency toward socialism in the plan for the municipalization of milk distribution.

Mr. Sam Greene, Manager California Dairy Conference: I merely want to comment upon one point in the discussion, that of the cost of food. I take it from the remarks that have been made by the preceding speakers, that they consider that the cost of milk is high and can be made lower. Costs of food are, in my opinion, comparative. You say that the price of potatoes is high, or that it is all right? The cost of milk to-day at 20 cents a quart, based upon the value that we get out of it as food, is as cheap as meat to-day at present prices, it is as cheap as a dozen eggs at 48 cents, it is as cheap as other foods. If I had the figures at hand, I could quote them exactly. In other words, milk at the price at which it is sold in any city of the United States, and particularly in the cities in California, is really cheaper to-day than any other food.

It may be possible to produce milk and distribute milk for still less money than it is being done for to-day. I offer no comments upon that point. But I do wish to point out the fact that, when someone says people cannot get milk because they can't afford it, it is because of a maladjustment of their ideas as to what they can or cannot afford.

Dr. Blake: I did not mention certified milk, because that is very high anyhow and is out of the question to the ordinary consumer. And I just want to add that the great object of the paper was simply as an entering wedge into new territory, and not to have the league take any special action on the subject at this time. I expected there would be remarks for and against, just as have been made in the discussion here. I may say that the health officers of Alameda have taken a very strong stand in favor of milk as a public utility.

Fire Departments who use the LAFRANCE DELUGE SET



have no difficulty in obtaining a tremendous fire fighting

Fitted with a 3-way aluminum Siamese with automatic valves, the LaFrance Deluge Set can be used with one, two or three lines of 21/2 inch hose.

Complete set consists of this equipment together with our latest improved aluminum platform, one 10-foot section of 3½ inch cotton rubber lined deluge hose, reducer and tips.

Guaranteed to be fully up to the American-LaFrance standard both as to material and workmanship.

Our Fire Supply Catalogue should be in your hands.

AMERICAN JAFRANCE FIRE ENGINE COMPANY, INC.

151 NEW MONTGOMERY ST. SAN FRANCISCO, CAL. 1302 WASHINGTON BUILDING LOS ANGELES, CAL.

Revised 1923 Street Improvement Forms

We have just completed a most thorough revision of all our legal forms in connection with street improvements to include the changes caused by recent amendments.

Street improvement is now being performed in the majority of our Cities and Towns, and the intricacies caused by our ever changing laws only increases the possibilities of serious legal errors. Our forms have been revised and rechecked by Attorneys and Street Experts, who are well versed in matters of this kind, and therefore, are as near perfect as possible to make them.

The forms are very complete, all legal wording being in full, leaving spaces that the various Cities must fill in, such as dates, descriptions and numbers.

We have put these forms in sets, which are sufficient to complete one street proceeding, or they can be ordered in quantities of various forms.

Why take the risk of errors by making your own forms, when ours will save both time and trouble.

Order one set of forms to-day, and be prepared against emergency.



A. CARLISLE & CO.

Specializing in Street Forms for Municipalities
SAN FRANCISCO

(Continued from page 507)

the fact that he joined in the petition to the municipality requesting such change.

Rockridge Place Co. vs. Oakland, 41 Cal. App. Dec. 42.

TAXATION

The determination of the question as to whether certain property of a public utility is or is not subject to state taxation as operative property, is committed in the first instance to the State Board of Equalization, and when the local assessor fails to give notice of his claim that such property is non-operative, the assessor is without jurisdiction to thereafter assess such property for local taxation, and his attempt to do so is void.

Great Western Power Company vs. City of Oakland, 64 Cal. Dec. 329.

The property of educational institutions is exempt from taxation under the constitution, only when such property is used exclusively for educational purposes, coming within the scope of the work of such institution.

Pasadena University vs. County of Los Angeles, 38, Cal. App. Dec. 304, 65 Cal. Dec. 345.

The decision of what is the correct valuation in the assessment of property subject to taxation, by a Board of Equalization within the limits of a reasonable discretion, after due hearing, is final and conclusive.

Globe Milling Company vs. County of Los Angeles, 41 Cal. App. Dec. 252.

The foregoing, I think, covers all of the decisions of general interest to municipalities during the past year. There are a number of decisions touching other questions, but they relate to individual cities only. I thank you for your attention.



PARAGON Fire Hose

"Anything less than the best in fire hose is a losing investment."

United States Rubber Co.

EUREKA FIRE HOSE DEPARTMENT 1104 I. N. VAN NUYS BLDG. LOS ANGELES CAL.

> 812 SEABOARD BLDG. SEATTLE, WASH,



GRIFFITH COMPANY

Owners of
FAIRCHILD-GILMORE
WILTON CO.

Paving Contractors

Rooms 500-504

Los Angeles Railway Building
Los Angeles

EDWARD GLASS

UNDERWOOD BLDG. SAN FRANCISCO

(Continued from page 380)

begin now and plan ahead for the things after we are dead.

Professor Samuel C. May, of the University of California: I would like to call your attention to an example that I happened to see in Minneapolis this summer, while attending the Governmental Research gathering there. There were four rows of trees along a road or avenue of 250 feet in width. Each tree represented some soldier that fell in the war. I don't know how many hundreds of thousands of trees there were in this huge stretch, but the trees are planted and each one has a name of a soldier who fell. It is one of the most beautiful illustrations of a boulevard that I have ever seen.

The President: By whom were they planted?

Professor May: By the City of Minneapolis, I believe.

Mr. Malcolm: I would like to go a little further into this question of planting trees between the curb and the sidewalk. Many cities have planted trees indiscriminately, and it interferes with our idea of a beautiful street very materially.

Mr. Mitchell: That was practically the question raised a moment ago. I shall have to leave that to somebody to

pass judgment upon. You will have to delegate that decision to a horticulturist. and give him authority to say when the tree comes out of there, and when it does not. You will have to do that in some way-there is no other way. I like Professor May's idea concerning trees representing our fallen soldier boys. I have given away trees just because I love the parks. I think if we could have, say in Westlake Park, in Los Angeles, a hundred families do that thing, or 50 boy scouts, 50 families, and get trees planted there, it won't be a garbage place much longer. The memorial tree is a fine idea. I got that idea in San Francisco. And, reverting to the soldier boys. I believe that we cannot do a nicer thing for the boys that are gone than to plant and care for a tree in the name of each, with just a little name plate for the son or the brother who has goneit is better than marble.

Mr. Johnson of St. Helena: Tree planting is a municipal function with us in St. Helena. We have in our tax rate one cent to pay for transplanting each year, and also have appointed a tree planting advisory committee. The thing we most want to know now is how to plant trees so they will grow. Some four or five months ago, I wrote a letter to the State Forestry Bureau about it, and our City Manager planted

N. CLARK & SONS

INCORPORATED 1889

Manufacturers of

ARCHITECTURAL TERRA COTTA, PRESSED BRICK VITRIFIED AND TERRA COTTA PIPE

TOTALOW WILL SIDE PROCESSO

HOLLOW TILE FIRE PROOFING

FIRE BRICK TILE AND KINDRED CLAY PRODUCTS

Office: 112-116 Natoma St. WEST ALAMEDA SAN FRANCISCO

some 300 Arabian Sycamore trees. I think there are about 50 of those left. We need education in tree planting, and will be glad to get information based upon which we will have better success in the future than we have had in the past.

Secretary Mason: It does not seem to me Major Kirkbride's question has been entirely answered. He wants to know how we can compel people, if the trees are to be planted inside the property line, to plant uniformly. That question suggests this idea to me: I wonder whether or not we have not been mislocating our parking spaces during all these years, and misplanting the trees in those parking spaces. Why wouldn't it be better to locate our sidewalk next to the curb, leaving the parking space next to the property line? Wouldn't you in that way afford an adequate space for trees and in effect broaden the street? And wouldn't it be more convenient for the vehicles which travel along the street to park alongside the

sidewalk next to the curb line, and also relieve some of our problems of street lighting by having the obstacles to light, coming from the trees, removed from the present parking space? I think our engineers and managers should devote some consideration to that phase of it, and, if we have been making a mistake in locating our parking space, the best thing for us to do now is to see how we can cure the mistake.

Mr. Turner: For Mr. Mason's information, that very idea is carried out in East Sacramento. The sidewalk is built along the curb, and then there is a wide space inside toward the property line, and there is a row of trees five or six years old there now, and we have no trouble with them.

Mr. Peck of Long Beach: We have in Southern California so many new subdivisions put upon the market, and I assume that is true in other parts of California also, that the question arises as to whether it would not be a wise provision in city planning and regional

Sacramento Capital National Bank Bldg. San Jose Bank of Italy Bldg. Los Angeles Fay Building

WILLIAM DOLGE & CO.

Certified Public Accountants Municipal Accounting

Audits, Examinations and Special Examinations. Accounting Procedures for Municipal Utilities. Budget Systems Installed

Telephone Sutter 697

369 Pine Street

San Francisco, Cal.

planning that provision be made in every small subdivision of at least five acres, that a park be provided.

Mr. Mitchell: In Los Angeles we do that work in connection with the City Planning Commission. There comes in a wonderful subdivision, and I sit down and write a letter, "Where have you made provision for a little park of a block or so?"-teaching people how to do it. Of course, one of the big things is how to get that over. You people who are city officials surely must be the ones to insist that that thing be done. The teachers in our school of experience are just as you to have it done-they help to educate on this problem. I am glad that thought came up, because in our city planning group-when a subdivision is being laid out-there is just the point why this provision for parks should be made, there is where you call in your horticulturist's service. Right there is

what I might call your ounce of prevention exceeding a pound of cures.

Mr. Andrews of Corona: Mr. Mitchell referred to the tap root and its importance. I think most of you will agree with me that the great majority of trees that we buy for replanting have the tap root cut off. Mr. Mitchell touched very lightly on that point, but I think there is more to it than most of us think. What effect does it have on the length of the life of the tree to cut the tap root?

Mr. Mitchell: I was a little afraid to go into detail on that. The tap root is just as fundamental to the structure of the root system as the main stem is to the shoot system. The primary root is responsive to the earth below, to what we know as earth pull. Some day we are going to cultivate the ground more deeply—we are only cultivating the surface to-day. When there is deep cultivation, of course the tap root has a better chance.

Equalization of Tax Assessments

Revaluation of Real Estate and Improvements By Modern Unit Systems of Realty Valuation

Solve Tax Assessment Problem; Establish Equity Between Taxpayers; Assure Necessary Increase In Tax Assessment Total; Added Municipal Revenues with Reduced Tax Rate, and Expanded Bonding Capacity

SYSTEM INSTALLED AND ADOPTED BY

Los Angeles City and County; Stockton, Santa Barbara, Marysville, Benicia, Redding, Manteca, all Arizona and Texas Cities, Portland, Ore., Cleveland, Des Moines, Denver, and Others

Consultation By Appointment. Write

JAMES G. STAFFORD

CONSULTING TAX VALUATION SPECIALIST

Box 400 Pacific Municipalities

529 PACIFIC BLDG., SAN FRANCISCO, CALIF.



"Lucky" Baldwin's Old Home Town

These views of First Street in the little but busy town of Arcadia, California, show two extreme sections of a road so very smooth, so perfect, that one who rides thereon may wonder.

Connecting the heavily-travelled Foothill Boulevard, which leads to San Bernardino, with the equally trafficked Huntington Drive, this further example of the efficacy of GILMORE ASPHALTIC ROAD OIL BINDERS shows no signs of wear.

The performance of GILMORE ROAD OILS years after they were applied leaves an impression of absolute consistency in service.

Their durability guarantees them against complaint.

GILMORE OIL COMPANY

700 I. N. VAN NUYS BLDG. LOS ANGELES, CALIFORNIA (Continued from page 17.7)

development that is incidental to the greater Southwest.

MUNICIPAL TERMINAL RAILROAD

Inseparably connected with the plan of a municipal harbor was the plan of a belt line railroad which should completely encircle the harbor, furnishing switching and transportation facilities to all the warehouses and wharves. thereby making it impossible for any corporation or combination of corporations to control the harbor traffic. Accordingly, the Municipal Terminal Railroad is in development. It consists of roadbed, trackage, electrical overhead construction, cars and engines. The road is composed of several units about the harbor, constructed as a part of the water frontage development, but at the present time connection between these separate units is only possible by the use of tracks and spurs of the steam lines and electric roads serving the

harbor. These separate units, however, have grown until the trackage exceeds twenty miles, including classification vards. The operation of the municipal road is made possible by an agreement with the Pacific Electric Railway Company, to which company is granted the right to switch its cars to and from the municipal tracks, upon the payment of a pro-rated tariff to the city. This agreement has resulted in a gross revenue of over six thousand dollars per month. It is hoped, as the years go by, to acquire additional rights of way to connect the entire system and place the city in complete control of the situation.

REVENUE

Los Angeles did not possess a harbor at the opening of the present century and for a number of years afterward, yet during the thirty-one days of last July there was a grand total of 633 ship arrivals of 1,650,000 tons. The figures show an increase of forty-three arrivals and a tonnage of 135,000 tons over



BEAUTIFUL LAWNS

Easily and Economically Kept Beautiful with our Modern Mowing Machinery

MOWERS FOR HAND-HORSE-POWER OR TRACTOR USE

H. V. CARTER MOTOR CO.

San Francisco

WE SOLICIT MUNICIPAL ORDERS FOR



VITRIFIED CLAY SEWER PIPE AND FERGUSON SEGMENT SEWER BLOCKS

THE PACIFIC CLAY PRODUCTS, INC.

600 AMERICAN BANK BLDG.

LOS ANGELES, CALIFORNIA

BURNS & McDONNELL

Engineering Company
CONSULTING ENGINEERS

Water Supply, Waterworks, Sewerage and Sewage Disposal, Power Plants, Gas Plants, Valuations and Rate Investigations of Municipal Utilities

LOS ANGELES, CALIF. Marsh-Strong Bldg. KANSAS CITY, MO. Interstate Bldg. June, 1923, the best previous period for shipping through the harbor.

During July there were 192 tank steamer arrivals to load approximately 15,350,000 barrels of Southern California oil for delivery to virtually every corner of the globe. In June, the best previous month for oil activity, 167 tankers came in to port to load approximately 14,000,000 barrels of oil.

It might surprise you to learn through government statistics that during May petroleum loaded on tankers in Los Angeles Harbor for points necessitating passage through the Panama Canal paid approximately 32% of all westbound tolls, 48% of all eastbound tolls and 56% of all tonnage passing to the East through the Canal.

The Los Angeles Harbor business constitutes, therefore, approximately 50% of the business of the Panama Canal. In tolls, the Los Angeles Harbor business is paying the Government an average of about \$1.750,000 a month.

Every two months, Los Angeles is paying back to the Government practically the original cost of the San Pedro breakwater. Not only that, but the creation of the outer harbor by the construction of the breakwater furnishes not only a safe anchorage for the greatest steamships afloat, but it supplies a harbor of refuge for the entire Pacific Fleet of the United States Navy.

And yet, when Congress appropriated the money for the construction of the San Pedro breakwater it was called "a waste of money." The City of Los Angeles has already about \$15,000,000 invested in its harbor and is realizing a good revenue from that investment—so good, in fact, that with the assurance of an immense increase it has voted \$15,000,000 more for still further development work. It has proven a good investment, not only for the Government, but for the city, and it is an investment that will increase in value as the years pass.

BOUND TO HAVE GOOD ROADS



Volunteer Roadbuilders installing Armoo Culverts, Citrus Heights Road Day, Sacramento County, March, 1923.

CALIFORNIA CORRUGATED CULVERT COMPANY LE ROY STREET, LOS ANGELES FIFTH & PARKER STS., WEST BERKELES

CONTROL

The control and management of the harbor is vested in a Commission composed of three members appointed by the Mayor, subject to confirmation by the Council. The term of office covers a period of four years. The President of the Commission receives a salary of \$4,000 per annum, while the other members receive a per diem of ten dollars, with a limit of ten days for each calendar month. The members of the Commission may be removed by the Mayor and the City Council concurring.

harbor and its Commission, under the existing charter, are limited. The Council is vested with the power of fixing the salaries of the Commissioners, but has no control over the salaries paid to the subordinate officials or employees of the Harbor Department. The approval of license fees to be paid to the City of Sangeles by firms and corporations operating and maintaining certain lines

The powers of the Mayor over the

of business in the harbor is reserved to the Council, and they may change or modify the same according to their discretion. Long-term leases are made by the Harbor Commission at rates established for ten-year periods by the Council. Outside of the restrictions enumerated, the Harbor Commission practically controls the disposition of the business and the conduct of its employees, which are at the present time over two thousand.

VALUATIONS

A few short paragraphs relative to valuations and the prophesy of the future, and I have finished.

The general port properties, including equipment, plant, materials and supplies on hand, municipal railroad, and the various terminals, have a valuation of over \$8,837,000. Real estate valuations have been placed in the neighborhood of \$34,000,000, making a total valuation of over \$42,000,000.

PIPE TANKS CULVERTS

For PERMANENCY use STEEL For QUALITY buy "WESTERN"

We furnish Pipe from 1-16" to 1" thick in any diameter.

WESTERN makes STEEL TANKS for all purposes.

Designed, Fabricated, Erected anywhere on the Pacific Coast.

WESTERN CORRUGATED CULVERTS will give service heretofore unknown, as WESTERN CULVERT METAL is of unequaled rust-resisting, non-corrosive Quality. You will find nothing but "WESTERN" Culverts under the State Highways.

Let Us Figure Your Specifications

Western Pipe & Steel Co. of Cal.

444 Market Street SAN FRANCISCO 1758 N. Broadway
LOS ANGELES

TAFT

BAKERSFIELD

FRESNO

The monetary value of the port to the community of Los Angeles has been conservatively estimated at \$100,000,000 a year. This is based on the estimate that each ship entering the harbor causes an expenditure of at least a thousand dollars in the communitythe fact that the Pacific Fleet of the United States Government spends at least five or six months of each year in the harbor, and distributes on an average of \$3,000,000 a month in the territory contiguous to the port. In addition, there is a saving in freight on coast to coast business that is not less than ten dollars per ton: while the revenue from exports, the profits accruing from the handling and selling of commodities, wages, construction and work provide for the rest.

What the people of Los Angeles expect of the future may be summed up in the few following words of Mayor George E. Cryer.

"Los Angeles is destined to be the

gateway of the West. Our harbor is the door of entry and exit, by which the men who do business in the great waters to the west will come and go: and our city, sitting as she does, as the keeper of the gate, will enjoy many desirable advantages that cannot help but add to her wealth and prosperity. Multitudes of men from all over the world will come to barter and to trade. They will linger to visit and admire and. captivated by the beauties and the advantages that are ours, we will gather them to us and make them our own. The culture and the learning of the ends of the earth will be here; and these things being woven into the texture of our civic life will make us the great cosmopolitan city of the West, a center of power and influence, admired and respected by all men.

"This is not a vision or a dream, but the literal and logical fulfillment of the steady march of events."



TRIDENT METERS FOR ALL SERVICES

Split Case Meters for Warm Climates
C. I. Breakable Frost Bottoms for Cold Climates
Hot Water and Oil Meters. Crest Meters for Large Flows
Compound Meters for all streams, Large and Small

TRIDENT DISC

Sold 158,000 in 1921

A record unsurpassed in the history of the Meter Business

MANUFACTURED BY

NEPTUNE METER CO.

NEW YORK

PORTLAND, SEATTLE, SPOKANE, SAN DIEGO

LOS ANGELES OFFICE AND WAREHOUSE 701 East Third Street



TRIDENT CREST
SAN FRANCISCO OFFICE
320 Market Street



Pacific Municipalities

A Monthly Review of Municipal Problems and Civic Improvements

OFFICIAL ORGAN OF THE LEAGUE OF CALIFORNIA MUNICIPALITIES

BAN FRANCISCO FUNLIC LIBRARY



SCENES NEAR PACIFIC GROVE On the road to Monterey, location of the 1924 Convention

LEADING ARTICLE IN THIS ISSUE

Proceedings of the Twenty-fifth Annual Convention of the League of California Municipalities at Coronado, California, (Continued)

Featuring the addresses on City Planning and Zoning

Publication Office Pacific Building, San Francisco, Cal. Two Dollars a Year Single Copy 25 Cent

THE F. L. DECARIE NON-STOKING OSCILLATING-GRATE GARBAGE INCINERATOR

recently installed for the City of Spokane, Wash.



We also installed this type of Incinerator for the City of Outremont. The result of test and report of the City Engineer and Manager are contained in this issue.

The City of Sacramento, Cal., has adopted this OSC!LLATING-GRATE, NON-STOKING type of Incinerator and now has under construction a plant of one hundred and fifty tons capacity.

This OSCILLATING-GRATE type has no connection with and is a complete departure from the water jacket type.

THE PACIFIC BRIDGE CO.

PACIFIC COAST REPRESENTATIVES

Address all communications to P. O. BOX 1214 Sacramento, Calif.

Pacific Municipalities

AND COUNTIES

OFFICIAL ORGAN OF THE LEAGUE OF CALIFORNIA MUNICIPALITIES

Entered as second-class matter March 22, 1913, at the Post Office at San Francisco, California, under
the Act of March 3, 1879.

VOL. XXXVII

TWENTY-SIXTH YEAR

No. 11

447

H. A. MASON and WM. I. LOCKE

Editorial and Business Office Fifth Floor, Pacific Building, San Fran	cisco
Advertising Rates on Application	
Address all Communications to "PACIFIC MUNICIPALITIES," Pacific Buildi San Francisco, California	ng
NOVEMBER, 1923	
NOTICE—Every city belonging to the League of California Municipalities is entitled to a of this magazine for each of its officials without extra charge. If not received kindly notice Secretary.	copy fy the
A. Carlisle & Co., Printers, San Francisco	_
CONTENTS	
PACIFIC GROVE, CALIFORNIA. By A. C. Jochmus	PAGE 403
THE FUTURE OF ZONING AS BASED ON EXPERIENCE TO DATE. By Judge Albert Lee Stephens	405
ZONING AND TRAFFIC CONTROL. By Carol Aronovici, City Planning Expert of Berkeley	409
SAN FRANCISCO'S EXPERIENCE IN ESTABLISHING SET BACK LINES. By H. A. Mason	411
EVIDENCE IN ZONING CASES. By Hon. Frank D. Stringham, Mayor of Berkeley	414
THE DEVELOPMENT OF REGIONAL PLANNING AND SUB- DIVISION CONTROL. By G. Gordon Whitnall, City Planning Director of Los Angeles	419
ACKNOWLEDGING ART AS AN OBJECTIVE OF CITY PLANNING. By John W. Mitchell, President of the Municipal Art Commission of Los Angeles	422
CITY MANAGERS OF CALIFORNIA ORGANIZED. By Clifton E. Hickok. City Manager of Alameda	431
REPORT ON THE OPERATION OF THE DECARIE INCINERATOR AT AUTREMONT, CANADA	433
REVIEW OF THE LATEST BOOKS AND ARTICLES ON CITY	

PLANNING. Conducted by Mary T. Hedges, State Commission of

Immigration and Housing

LEAGUE OF CALIFORNIA MUNICIPALITIES

Affiliated with the Bureau of Municipal Reference, University of California

OFFICERS

President, CHARLES N. KIRKBRIDE, of San Mateo President, CHARLES N. KIRKERIDE, of San Mateu-Vice-President, NORMAN E. MALOUM, City Attorney of Palo Alto Becretary-Treasurer, H. A. MASON, Bond and Ordinance Expert of the City of San Francisco Executive Secretary, WM. J. LOCKE Headquarters: Pacific Building, San Francisco Official Printers: A. Carlisie & Co., San Francisco

INFORMATION BUREAU

The League of California Municipalities maintains in connection with the Secretary's Office as Bureau for farnishing city and town orificials with information on municipal affeirs, and loanic copies of new ordinances and specifications. Officials are urged to make a free use of the Bureau. Kindly send a effi-addressed stamped envelope in all cases.

Members of the California League of Municipalities

Orange

San Rafael

Jackson

Covina

Alameda

Albany	Corte Madera	Kennett	Orland	Santa Ana
Alhambra	Crescent City	King City	Oroville	Santa Barbara
Alturas	Culver City	Kingsburg	Oxnard	Santa Clara
Amador City	Daly City	Lakeport	Pacific Grove	Santa Cruz
Anaheim	Davis	Larkspur	Palo Alto	Santa Maria
Angels	Delano	La Mesa	Pasadena	Santa Monica
Antioch	Dinuba	La Verne	Paso Robles	Santa Monica Santa Paula
Arcadia	Dixon	Lemoore	Patterson	Santa Paula Santa Rosa
Arcata	Dorris	Lindsay	Petaluma	Santa Rosa Sausalito
Arroyo Grande	Dunsmuir	Livingston	Piedmont	
Auburn	East San Diego	Livermore	Pinole	Sawtelle
Avalon	El Cajon	Lodi	Pittsburg	Sebastopol
Azusa	El Cerrito	Lompoc	Placerville	Selma Sierra Madre
Bakerafield	Elsinore	Long Beach	Pleasanton	
Banning	El Segundo	Los Angeles	Plymouth	Sisson
Beaumont	Emeryville	Los Banos	Point Arena	Soledad
Belvedere	Etna	Los Gatos	Pomona	Sonoma
Benicia	Eureka	Loyalton	Porterville	Sonora
Berkeley	Exeter	Lynnwood	Potter Valley	South Pasadena
Beverly Hills	Fairfield	Madera	Red Bluff	South San Francisco
Biggs	Ferndale	Manhattan Beach	Redding	St. Helena
Bishop	Fillmore	Manteca	Redlands	Stockton
Blythe	Fort Bragg	Maricopa	Redondo Beach	Suisun
Brawley	Fort Jones	Martinez	Redwood City	Sutter Creek
Brea	Fortuna	Marysville	Reedley	Sunnyvale
Burbank	Fowler	Mayfield	Rialto	Susanville
Burlingame	Fresno	Merced	Richmond	Taft
Calexico	Fullerton	Mill Valley	Rio Vista	Tehachapi
Calipatria	Gilroy	Modesto	Riverside	Tracy
Calistoga	Glendale	Monrovia	Roseville	Tulare
Carmel-by-the-Sea	Glendora	Montague	Ross	Turlock
Chico	Gridley	Montebello	Sacramento	Uklah
Chino	Gustine	Monterey	Salinas	Upland
Chowchilla	Hanford	Monterey Park	Sanger	Vacaville
Chula Vista	Hayward	Morgan Hill	San Anselmo	Vallejo
Claremont	Healdsburg	Mountain View	San Bernardino	Ventura
Clovis	Hemet	Napa	San Bruno	Venice
Coalinga	Hercules	National City	San Diego	Visalia
Colfax	Hermosa Beach	Needles	San Fernando	Walnut Creek
Colton	Hollister	Nevada City	San Francisco	Watsonville
Colusa	Holtville	Newman	San Gabriel	Watts
Concord	Honolulu	Newport Beach	San Juan	Wheatland
Corcoran	Huntington Beach	Oakdale	San Jose	Whittier
Corning	Huntington Park	Oakland	San Leandro	Willits Willows
Coronado	Hyde Park	Oceanside	San Luis Obispo	Winters Woodland
Compton	Imperial	Ojai	San Marino	Yreka Yuba City
Corona	Inglewood	Ontario	San Mateo	Total 243

Associate Members-Oregon: Astoria, La Grande

I LISBARI

Pacific Municipalities

AND COUNTIES

OFFICIAL ORGAN OF THE LEAGUE OF CALIFORNIA MUNICIPALITIES

Entered as second-class matter March 22, 1913, at the Post Office at San Francisco, California, under the act of March 3, 1879.

PACIFIC GROVE, CALIFORNIA

By A. C. JOCHMUS

EDITOR'S NOTE-The next meeting of the League is to be held at the Hotel Del Monte on the Monterey Peninsula, and City Officials will no doubt be interested in learning more about the attractive places in the vicinity of this famous resort.

To see with one's own eyes the places made famous during the early days of California-the Spanish Missions, the entrancing scenery and the alluring climate of California, is in the heart of every person who plans a trip to the Monterey Peninsula.

(Pacific Grove, California-"Winter Paradise," warm sunshine in winter.) Just as a man is known by the company he keeps, so is a community. Some cities are proud of their charms, wealth and gaiety, others of their educational institutions, or their churches, and their high moral standards. Pacific Grove. beautiful and fascinating, useful and progressive, young in years, founded in 1869, has become known as the playground of California, a city of homes, located on the shores of Monterey Bay just 128 miles from San Francisco and 373 miles from Los Angeles, over paved highways. Pacific Grove has a permanent population of 3,500, and some of the most beautiful and artistic homes on the Peninsula are located here. It is set on the rocky cliffs of the outer Peninsula, but is well sheltered by the woods that gave it its name. Stanford University's new concrete Biological Laboratory is here, where regular courses in Zoology, Botany and Physiology are given by the faculty during the summer months.

Pacific Grove is a church going community. All denominations with one exception are to be found here. Tennis courts, roque courts, horseshoe courts, are conveniently at hand in the heart of Pacific Grove for the devotees of these games-indeed there is no outdoor sport of any sort that you will find lacking in Pacific Grove.

Schools-A more ideal location for public schools than Pacific Grove, does not exist. Here on the Monterey Peninsula, forest and water meet and the fragrance of the pine combines with the cool salt breeze from off the Pacific to energize mind and body to do their best. In addition to all this and a most equitable climate are offered superior moral and intellectual advantages. In 1911 the high school was provided with a separate building at a cost of \$40,000, exclusive of equipment and some four acres of ground. A grammar school costing \$100,000 has just been built which embodies the latest ideas in school construction.

DAHLIAS-"The Dahlia City." This name has been given to Pacific Grove as it is now the dahlia center of the west.

BEACHES—Several beaches with fine clean sand are within a few minutes walking distance. A safe place for children to wade.

GOLFING—Two golf courses are at hand. From the standpoint of the man or woman who loves outdoor life and sports there is every opportunity at their disposal. Golf, the fastest growing sport in America to-day, offers its visitors unparallel opportunities in Pacific Grove. Close by are found two of the best golf courses in the country.

ASILOMAR—The headquarters of the N a tion a l Board, Young Women's Christian Association. These grounds comprise fifty acres, with many spacious, substantial buildings of unique architectural features. It is the only institution of its kind in the world, and is within a mile of the center of Pacific Grove. Here are held conventions, bringing together hundreds of young people for educational and spiritual betterment.



Upper left, Convent 1852; upper right, Quartel 1840; lower left, Sherman and Halleck Headquarters; lower right, Hotel Washington, insert the Duke of Monterey.

PROCEEDINGS (Continued)

of the

Twenty-fifth Annual Convention

LEAGUE OF CALIFORNIA MUNICIPALITIES

at

HOTEL del CORONADO :: CORONADO, CALIF.

SEPTEMBER 11, 1923

The Future of Zoning as Based on Experience to Date

By JUDGE ALBERT LEE STEPHENS,
Formerly City Attorney of Los Angeles, now Judge Superior Court, President State Planning
Association, Member Planning Board, City of Los Angeles

Years ago, even "before the war," this body met in Santa Rosa and honored me by listening to me for half an hour on such a matter, on the then little known power of zoning. As city attorney of Los Angeles, I had had occasion to study the question and watch its development. I saw it applied in our city, in a practical working law, and listened with great respect to eminent constitutional lawvers pronounce the postulate that the free use of private real property cannot be limited and that therefore this law was unconstitutional. And then I saw the day when the Supreme Court of the United States sustained my arguments, and by so doing, pronounced this postulate in its absolute form a fallacy of American lawvers.

At Santa Rosa, I talked to the League about the importance and great benefits to follow this newly found municipal

power. Others did the same. This tune as it were, became popular like "Little Annie Rooney," or "A Bicycle Built for Two." Like other things in this state before the war, it improved with age. Cheney and Whitnall, and Locke and Stringham were whistling it, humming it, and setting it to variations. They are still at it. I quit. Openly quit. But sometimes hummed it under my breath. Its persistent, not to say insidious air twanged mentally, whether I would that it should or not. I became engaged in other matters, but here I am again out of practice, behind the times as to later developments perhaps, trumming the old thing to you young performers and to you old masters.

Adam alone in the Garden of Eden must have zoned. After he had eaten of the non-forbidden fruit, he must have declared: "Yes, I will have no banana skins lying around certain parts of my

little garden to slip up on." "I can't have my sandal works on the same side of the apple tree where I sit in meditation and contemplate the previews of eclipses.* Every housewife is a city planner, a zoner. If she can help it, or before she moves into a modern apartment, she doesn't eat, sleep and fry out hog fat in the same room. She zones her activities. She plans the care of the kiddies. But the city fathers of the past thought that cities could better just grow up. Then there was the layman and the lawyer with the unrestricted right to the use of one's real property doctrine. At the very first mention of zoning, most of us lawyers jumped to the conclusion that it was unconstitutional. I expect, from a practical standpoint, it was unconstitutional fifty years ago. But as cities grew, the free use of private property, and the liberty of action doctrine so firmly fixed upon the American mind, both lay and legal, turned upon its advocates and destroyed itself. For what a travesty on such a noble doctrine was the erection of a meat market or a five-story storage plant with its stark bare walls on the property and street line adjacent to an elegant city mansion or cozy bungalow! Bassett of New York, condenses the indictment against the unzoned city in his pamphlet which contains the following significant statement: "For these reasons the city was not as economically sound as it would have been if through community action it could have kept its house in order."

It seems to me to follow, without argument, that every group of citizens, with community problems developing important enough to move them to incorporate a municipality, must hereafter find it necessary to keep their houses in order through sensible, intelligent non-arbitrary city planning—zoning being only one of the related problems.

What have we accomplished in the less than a score of years of legal zoning? First: We have found out that a law which intelligently, reasonably and nonarbitrarily restricts the use of privately owned real property is necessary to protect real property from irreparable damage. Second: We have indisputably established the fact that there is no constitutional inhibition against such a law. That is all there is to it. Nothing is left but application. But application requires knowledge. Knowledge of the law. Knowledge of human nature. Knowledge of your city. It requires patience, stiff backs as distinguished from stiff necks, love of fairness, honesty. With a mayor, board, city attorney, city engineer thus equipped, the house can be put in order and kept in order. Of course, you shouldn't wait for these conditions to be perfect before starting. No matter how desirable perfection is, you must get along somehow with something less. Without knowledge of law. you immediately run counter to adverse decisions, because you have been unreasonable or arbitrary. Here is the application again, of that legal postulate heretofore referred to. And it will be easy to see that the courts have affirmed this American doctrine of free use of private property in every practical way by holding that interference by law of the free use of private real property is possible only where such interference can stand the test of reasonableness and is non-arbitrary in character; otherwise, and most fortunately, the owner may use his property as he wills. The courts construe this doctrine along with that other safeguard: "That one may not use his property to the injury of another."

From the beginning of my work along these lines, I feared the doctrine I

This address was delivered the day after the recent eclipse of the sun.

advocated. I feared that once we unmistakenly gained the right to zone, we would become the victims of bureaucratic orders, directed arbitrarily and without regard to principle. One of the Judges, I think of the Supreme Court of Minnesota, once held, in a dissenting opinion, against all zoning, on the ground that such right would mean the sacrifice of personal liberty more dear to us than the benefits to follow the planning of cities.

As a rule, professional city planners, laymen and engineers on planning boards, recently convinced of the benefits of city planning, and some few city attorneys I must add, look contemptuously and unstintingly criticise the courts for what they call old fogyism and non-progressiveness for pointing limitations. These limitations have not only made zoning possible, but have made it desirable under all the circumstances. And these very same decisions have entirely robbed me of the fears I have alluded to.

The most important work from now on, that will fall to city attorneys in planning and zoning work, will be to hold back and with stiff-backed insistence require that the lines of legality already pointed out by courts and specially equipped lawyers be followed. I don't mean to hold that we have learned all there is to know, nor that we have reached the end of legal advance. I do mean that the impatient, enthusiastic planner will establish some very objectionable set-back lines, unless the city attorney does his part both wisely and courageously.

Every zoner must have a thorough knowledge of his city. And every commission should be composed of members from the different geographical districts of the city and from every social division thereof. The city planner should begin his work with not only an acquaintance

with his own city of the day, but should know its history and stages of development. He also should know other cities. Cities, like men that compose them, are much alike essentially, but very different in particular parts. Your consultant, if a local man, should have a broader vision than the twenty-mile radius from the County Court House. If an imported man, don't go off satisfied with his doing the job. If you do, you will probably have an ill-fitting suit made after the particular fad of your consultant (all specialists are somewhere and in some manner faddists), or you will have a ready-made affair, made to the measure of another town. Notwithstanding these remarks. I am strongly inclined to the imported article. The adage that "A prophet is not without honor except in his own country" holds good here. Every phase of planning requires patience. The tendency to hurry to get something is one of the greatest dangers.

Well do I remember the first meeting of the Los Angeles Board of 51 citizens. Almost before organization, the chair announced that the secretary would read a communication from the city council. It ran something like this: "Honorable Members Planning Board: We hereby refer to your honorable board, the question of whether or not lot-etc. (describing the lot) shall be zoned for an undertaking establishment." Com. Blank jumps to his feet, "Mr. President, I am personally familiar with the locality mentioned. board should immediately become a factor in the city government. I move you that the secretary be directed to address the honorable city council, and to say that this board unanimously disapproves of the request to put this lot in the undertaking zone." I was frightened. I arose and under the personal privilege asked how many such

communications graced our secretary's desk. There were several. The board, by big majority, was feverishly desirous of doing something right off the bat. I took the lawver's risk of being accused of causing delay and of being technical, cautioned against precipitous action before formal investigation. Said it was my idea that we should study the whole city thoroughly; take a year at it before we could undertake the responsibilities of zoning, and then take in the whole city or some natural division of it in one comprehensive ordinance. This was not popular doctrine, but I wasn't booed, so I ventured further: Suggested that we may as well here and now adjourn sine die as to become the willing goats, the official passees of the political buck. That evening, after a long fight through the help of others who saw the danger early, the fight was won. Through the motion, if I remember right, of the member who made the first motion. The council's request for zoning help was declined in a diplomatic note. I relate this merely as an illustration of what will take place in other localities. Our board soon got down to hard work with patience, courage and courtesy to everybody, including Mr. Well Known Citizen who comes in with not only helpful suggestions but with some special favor to ask, and many times the unwilling tool of veiled interests. It should be borne strongly in mind through all preliminary zoning work that public confidence through frank actions and intelligent educational work is absolutely necessary.

Zoning experience is now broad enough for us to mark some of the failures and to avoid them. When zoning first developed it was by the piecemeal method. And the continued use of this method by a few cities is zoning's greatest danger. To be legally privileged to go ahead with any use of any lot in town

unless or until the legislative body interferes, offends against every tenet of zoning. Proper zoning stabilizes. This method unstabilizes. No man knows whether or not he can use his property until he attempts to use it and after he has financed and planned his improvement. Then the council or board zones his right away. Some other neighborhood of the same character but without an objecting citizen, is used for the same purpose within the law. Here is discrimination with a vengeance. Here also, is the finest field for political reward and punishment. Here also, is the making of

Western cities are growing, changing, forming. Financial interests are looking to our cities from San Diego to Eureka for investment (both inclusive). A group of Eastern financiers, we will say, wish to purchase a city block here in San Diego for an industrial enterprise. They select a site: are advised that everything is all right. Preliminary work is done. The money is paid when, what ho! Some citizen petitions the council. Requests a zone ordinance denying the use of this property for the intended use. The interests face a lawsuit and opposition, when they thought they had city co-operation. Do they under these circumstances retain their enthusiasm? Do they buy another site where the process may be repeated on them after disposing of the original one? Do they advise other industries to come to San Diego? The answer is obvious

Then there is the fellow who rises to remark that Western cities are growing. "Then would you mould your cities according to some board's idea of development, or would you let them freely develop?" I hear him with that conclusive "I've got you" tone, and he surely has if we don't watch out, for

that question has in it a danger that we must avoid. And there is no possible alibi if we do not avoid it. At this day, no student of zoning is without knowledge that zoning must have ample provision for flexibility and change when circumstances indicate its desirability. And without the knowledge that one of the cardinal rules of zoning is that you cannot zone ahead of the tendency already shown by the district development. Zoning cannot create new or indicate original kinds of development. It only attempts to direct that the use to which a section of the city is already devoted shall not be spoiled for that kind of use, by allowing another sporadic use that is fatal to it. And then there is always that stop, look and listen sign before every city planner or zoner. For

no matter how greatly zoning always does add to the beauty of a city, zoning is never based upon aesthetics, but is always related to the public health, safety, morals and general welfare.

President Merritt: Inasmuch as the important topic of zoning received the highest number of requests for discussion, in reply to questionnaires sent out by our secretary, this morning has been set aside exclusively to the subject of zoning and kindred matters, and I think it wise that we have no discussion of the question until after all of the speakers have been heard. I think it will work out much better in that way.

The next sub topic is "Zoning and Traffic Control," by Mr. Carol Aronovici, city planning consultant of Berkeley.

ZONING AND TRAFFIC CONTROL

By CAROL ARONOVICI

City Planning Expert, Berkeley.

Mr. Chairman, Ladies and Gentlemen: The subject of zoning was, as it seems to me, most excellently treated by Judge Stephens. One of the points that he made, and which I think is to a certain extent true—I must acknowledge it—is that most of the specialists, so-called, in this matter of zoning, are faddists. For that reason, it is with some misgiving that I appear to talk to you about zoning

We are unfortunately in the position of prophets, generally considered false prophets, with regard to the development of cities, and if we are very persistent, we meet the fate of the prophet Jeremiah, who, you remember, was going through a great deal of experience, and was finally thrown into the sewer, and I think probably a good many of the real estate men would like to have

us consigned there, too, on account of our persistency in pushing the question of zoning.

It is generally conceded, I believe, that the important courts are acknowledging the rights of the cities to control the use of land from the point of view of zoning. There are a number of decisions that are quite helpful, and more recently, we have so far convinced some of our people, that they are beginning to bid for zoning so far that the city councilmen and even the city planners must put the soft pedal on their demands. We find, for example, that churches are objected to in some cities, to such an extent that the newspapers describe it as a fight between, say, the Episcopalians and some other creed. And, incidentally, there are some citizens who have been fearful that the church would interfere with the value of their adjoining properties. But that is not the subject on which I want to talk particularly. I am interested in pointing out the value, and not the difficulties of zoning, from the point of view of traffic control.

Generally speaking, zoning has been confined to the development of plans which would segregate the particular functions of the community into certain groups, say industry, business and residence districts. And that is about as far as we have gone, excepting that we have put in various subdivisions. In the city of Berkeley. I believe we have eight subdivisions at the present time. In other cities they have only six, or four-so on. In that connection I would like to suggest to the League the appointment of a committee to work out some sort of a uniform system of classification. Pretty nearly every plan I have looked at has a different plan of classification. With the help of those who are already interested and confirmed zoners, so to speak, and a few of the expert faddists in the State of California, we might come to some agreement so that there will be very much less divergence of opinion about classification between the various cities interested in zoning.

An important thing in our city development is, of course, the circulatory system, namely, the street system. And no matter how much zoning you are doing, unless your street system fits in with it, either one or the other is bound to fail. Your main roads should be developed, and I don't believe the main arterial system could even be materially developed without establishing zones. So one is dependent upon the other.

That isn't a new idea by any means. In Europe they recognized it a long time ago, and they have developed certain standards whereby the character and the use of the building determined the width of the street, which I think is the only way of solving our traffic problems.

Those of you who are familiar with zoning, will realize that all zoning is horizontal. In other words, we take the city, and we zone it according to the use, the uses that might be allotted on particular areas. But it is on the flat, so to speak, and we take no particular account of anything else. The cities of Europe for the last thirty or forty years have been taking a broader view of it. Strassburg had a law, enacted about 1864, I believe, in which they recognize that zoning is as much vertical as it is horizontal, and, therefore, that they should not only zone in regard to the use of land for particular purposes, but also from the point of view of the height of buildings. That fact was recognized. too, as you remember, in the most monumental piece of work ever done in this country, namely, the height of buildings in the city of New York. Unfortunately they have not been able to develop a street system commensurate with the needs of the heights of their buildings, but they are restricting the heights of buildings to control somewhat their general traffic.

Aside from the problem of vertical zoning, there is also the problem of the use of land, not only from the point of view of the character of the use or what might be called the qualitative use, but also the extent of the use of a particular piece of property, which might be called the quantitative use. The little experience I have had in this state has shown that a city may be confronted with a problem like this: They are going to put up a factory in a particular locality. The question is, is it going to be a factory employing ten people or one hundred people or one thousand people, one that will congest

San Francisco's Experience in Establishing Set-Back Lines

By H. A. MASON

President Merritt: The next topic on our program is "San Francisco's Experience in Establishing Set-Back Lines." Mr. R. S. Woodward, secretary and engineer of the San Francisco City Planning Commission, was to have addressed himself to this topic, but he found himself unable to be here, and Mr. Mason, our secretary-treasurer, will substitute for him on the subject. Mr. Mason needs no introduction.

Secretary Mason: Mr. Chairman and Members of the Convention: I wish to express you my disappointment that Mr. Woodward could not be here to-day. When he accepted the invitation to appear here and to speak to us upon this subject, he did it with the qualification that it might not be possible for him to come. And when it was found that he could not, he asked me to take his place. And, inasmuch as for a period of two or three years, I was secretary of the San Francisco City Planning Commission, possibly I may in some respects qualify to take his place, and be able to give you something of San Francisco's experience.

I want to say first, that upon the organization of the San Francisco Planning Commission, about four years ago, one of the most insistent demands that were made upon the Commission was to relieve property owners from the danger of intrusions of builders along the property line. There are many places in our city that have been built up with a certain amount of restrictions in regard to the establishment of a set-back line. Many had conformed tacitly to a line which had been sort of

established. But at the same time, there were unimproved lots, and vacant spaces in a block, and every little while an owner of such a lot would build his structure out to the property line. It is easy to be seen the injury that such an owner would inflict upon all the rest of the people in that block. It was a matter that was constantly occurring, however. Therefore, it became necessary for the Planning Commission, as soon as they had completed their general work of zoning, to give some attention to the question of establishing a system for demarking and fixing the set-back lines along the streets in the city.

We first gave attention to the legal aspects of the matter, hesitating to some extent whether or not to proceed to establish a blanket system for the entire city, exercising the police powers of the city in so doing. We found very serious objections to that plan. First, it would have taken a long period of time, certain general rules would have had to be fixed, which would have created a large number of exceptional cases. Each one would have to be met. The legal rules in regard to exercising police powers requires a certain amount of uniformity. Then, wherever the reason might exist for the establishment of a rule, the rule would have to be applied. So it was that we practically abandoned the idea of doing that work under the police power of the city.

We were acting very largely under the advice of Judge Matt I. Sullivan, who was at one time a Chief Justice of the Supreme Court of the State, and who was president of the Commission. We

were also confronted with the law upon the statute books of the State which limited the powers of the cities to a certain procedure, involving more the powers of eminent domain than police powers. We considered whether or not that was a restriction upon the powers of cities with freeholders' charters. Considering that the charters themselves were silent upon that subject, we came to the conclusion that there was a restriction upon the city, even though it had a charter, that the general law limited the cities to a procedure which the law itself provided; and that there should be a resolution of intention, a notice and a hearing, so that anybody who might have objections or claim damages could have an opportunity to present them, and that hearing could then be followed by a formal determination and declaration establishing the set-back line. So we conformed to that statute and we prepared an ordinance which was in conformity with the statute. The ordinance provides that the City Planning Commission may, of its own initiative, or on petition of property owners, recommend to the legislative body, in our case the Board of Supervisors, the establishment of a setback line along any street or portion of a street; that recommendation to be accompanied by a map or diagram showing the street affected and the line which was to be established. Upon receiving that recommendation, it is the duty then of the legislative body to pass a resolution of intention, reciting that it is the intention of the Board of Supervisors to pass an ordinance establishing the set-back line in accordance with the recommendation of the Planning Commission, to which reference is made. and fixing a day for hearing and directing the posting and publication of the resolution of intention. That we have now done, to the extent of having

established set-back lines on more than

The City Planning Commission has, in most cases, acted upon the request of citizens of some particular block, though in others it has acted on its own initiative. The result has been that we have had very, very few objections, not to exceed perhaps eight or ten objections, to the establishment of those lines. procedure becomes merely a formal one. Wherever objection has been made. that particular block is eliminated and sent back to the Committee for further investigation and further report. Sometimes nothing is done, and the matter is simply left until a time when the property owners shall wake up to the necessity of getting action upon it. In several cases we have overruled objections. We have had quite a variety of objections, some of them even going to the extent of objecting because the setback line has not been established deep enough-they wanted more of a restriction than that which had been imposed.

We haven't had any sort of litigation. So far, everything has been reasonably harmonious, and we are quite satisfied with the progress being made. Of course, we have thousands and thousands of city blocks. We have only attempted to exercise this particular procedure in the residential district, of course. But there are very many more residential blocks that may have to be considered.

In connection with the actual establishment of the set-back lines, of course, we find different problems arising in nearly every block as compared with others. One of our worst problems has been due to the fact that our lots are very narrow, in most cases only about 25 feet wide, and not very deep, running from about 100 feet to 140 feet—and a lot 140 feet deep is a pretty deep lot in San Francisco. So that our lines

are not very far away from the street And then, of course, the real problem comes, in the question of how you are going to treat the corner lots. and how are you going to treat the key lot or the lot adjoining it at its rear? We have been extremely conservative in regard to establishing set-back lines along the margin of a 25-foot lot, running for 100 feet along the side of the street carrying the set-back line. can't take much off that lot for set-back The ordinance would be held to be unreasonable, and we would be held, perhaps, with claims for damages for taking the property if we did. So we haven't attempted, in the case of a 25-foot lot in depth, to take anything off by way of a set-back line from the street. When we come to the key lot, however, It wouldn't be fair to the owner of the key lot to require him to put his building back to the full depth of the set-back line that may be established for the remaining portion of the block, and permit the corner lot owner to build out to the street line. So we adopted the practise of staggering the set-back line. For instance, if we established it at, say, 15 feet for the block frontage generally, the key lot would be staggered back five feet, and the next one ten feet, and then the third lot would take the regular 15-foot setback line. If the same condition exists on the other end of the line, just stagger the line back again in the same way. The result is that you have really made permanent the line of the street, and the effect of it is altogether satisfactory. If you were to take and visualize a block treated in that way, standing in the center of the street and of the block and looking down both sides, you would find a gradual curvature, a sort of an oval space, which would be attractive, could be maintained and made attractive, and have practically all the advantages of a regularly-established set-back line on an even frontage, and perhaps in some respects it would be more desirable.

I don't know that I can say more than that, Mr Chairman. Perhaps someone may have some questions to ask, which I shall be glad to endeavor to answer if I can. Perhaps the main thought that I give you is that we have proceeded conservatively, we have recognized the principles laid down by Judge Stephens that your procedure must be reasonable, must be capable of close scrutiny, must not infringe upon the established constitutional rights of property owners, and at the same time, it must operate to prevent unwarranted interference by one property owner with the rights of another. We think we are proceeding along safe lines as well as conservative, and I may say that I think that cities will find that ultimately that is the best procedure, rather than to arbitrarily and by some set and fixed rule of trying to treat the entire city as one single set-back line proposition. lay out your residential section all at once. (Applause.)

City Attorney Malcolm of Palo Alto: Mr. Chairman, we have with us this morning, Mr. Cheney, and I understand he has recently returned from zoning the city of Portland. I would like, if it is in order, to hear a few words from Mr. Cheney as to his recent experience.

President Merritt: We have a program arranged, and it would occur to me that the best thing to do would be to conclude with the program as planned, and then listen to Mr. Cheney. With that idea in view, I will present to you Mayor Frank D. Stringham of Berkeley, who will talk to us on the subject of "Evidence in Zoning Cases." (Applause.)

EVIDENCE IN ZONING CASES

By Hon. Frank D. Stringham, Mayor of Berkeley.

Mr. President, and Members of the League: I suppose that you understand as well as I do that there has been a real revolution in this country in the matter of our legal status. An industrious man made a report recently to the effect that over one million laws had been passed in the United States during the last fifteen years. Not only that, but we have had a great amendment in our law by judicial determination, and in two very important particu'ars which concern municipalities without any formal amendment of the Constitution of the United States. These are upon the subjects of zoning and the regulation of public utilities.

Some eight years ago we first took up this question of zoning, and to give you my background, I want to say I was rather conservative, and am yet, in regard to the question of regulation of various kinds. Eight years ago Mr. Locke invited me to address one of these conventions, and to choose my subject. I chose the subject of the Legal Aspects of City Planning, because at that time I was City Attorney, and I wanted to familiarize myself with the subject; not to talk about it, because I knew really very little about it. I wrote that paper, and it was published. The City Planners saw it in the East, and invited me to come to Kansas City and talk upon the subject. Mr. Bassett, Mr. Ford and others got me very much interested in the subject, and I believed in it for the reason that fifty or a hundred thousand people cannot live together on a few square miles of adjoining property and be happy and comfortable unless there is some regulation as to how they shall use their property.

During the last ten years, I have had many attorneys of prominence say to me, "Why, all this zoning business is unconstitutional. You can't enforce it in the courts." And to-day some of those very same attorneys are coming to recognize that they cannot very successfully resist some of these regulations. Last September I tried a case against one of those very attorneys, a case involving the constitutionality of the Berkeley zoning ordinance, and that is more or less the specific subject I am going to talk to you about.

The question was whether a lot which had been put into a residential district, and which adjoined a business district. and was on the corner of a street opposite stores-whether or not that lot could be kept in the residential district. During the trial of the case, before a judge who previously knew very little about zoning, I kept constantly before the court the idea that if he thought that this was unreasonable, he could hold the ordinance unreasonable trying to apply the principles of zoning without saying that the ordinance itself was unconstitutional in any particular. I did not want to hazard the ordinance. The result of the trial was that the lower court did hold that that particular lot should not be put in the residence district; that it would be depriving the man of the legitimate use of his property. It was a hard case. But the court said to me, when the other side drew up some proposed findings declaring our ordinance unconstitutional, that he believed in zoning, and that he would by no means hold any portion of the ordinance unconstitutional.

It is now six years since in the article referred to I used these words: "We want to keep out of court until the reasonableness of the law is better understood, and the practical operation of the plan has been tested by actual experience." We did keep out of court for five years, and when we did get into court the work that had been done by the City Planners and all those people interested in zoning, had had its effect upon the court, and the court believed in zoning and knew what we were talk ng about

If any of you, as members of councils or city attorneys, expect to zone your city, or have zoned it. I believe that you must be prepared to go to the expense of employing and seeking expert advice, or you must vourselves qualify yourselves and study the subject of city planning and zoning, so that you can apply it in your city according to general principles, and not with haphazard judgment. That is the way we have been able to sustain in various parts of the United States the validity of the zoning ordinances, because public opinion is the great factor in these cases, and we have educated the people to come to believe in zoning.

The zoning ordinance of New York, the resolution of August 16, 1916, was an epoch-making law. Other cities have followed that general classification. We also notice this: In examining the decisions of the courts of the different states, we find that the decisions are most favorable in those states where the people have been educated and public opinion developed to the point of believing in zoning; notably Massachusetts, New York, Minnesota and California.

Before you go into court (and you must ultimately be prepared to go to court with your ordinance) you must be in the best position possible to defend your zoning ordinance when you find yourself there. That is the thing that we had very fortunately done in Berkeley, with the aid of Mr. Cheney and others who were interested in that subject.

The first witness I put on in the case to which I referred was the Mayor of our city, and I had him testify as to the number of public hearings that we had had before the council before the ordinance was adopted, in order to show that it had been given reasonable consideration. We proved that we had had from twenty to thirty or forty public hearings before the council and City Planning Commission. In addition to that, we proved that we had had perhaps 50 or 100 different meetings, over a period of two years throughout the city of Berkeley, which were gotten up and addressed by either Mr. Cheney or myself. We had prepared the public mind of the city of Berkeley, so that all the real estate associations and the clubs, particularly the improvement clubs, would be familiar with this subject of zoning before the ordinance was presented to the people. We did have a vote upon it by referendum. The ordinance carried and it is still on the books.

We also put on the stand an expert who came into court with about eight different maps which he had prepared upon our instruction. That cost something, but we wanted to do the best we could to protect the ordinance. We had a colored map showing the zoning of the city under our ordinance 666, which was the general zoning ordinance, dividing the city into six or eight classes -eight I think it was then. We also had another map showing the districts which were zoned under the single family residence classification under a separate ordinance, numbered 452, an ordinance which provides that people may come in and petition that a certain district of the city be zoned into a single family residence district, and protect itself from apartment houses, double houses and multiple dwellings. The reason for this separate ordinance was that the legality of such an ordinance is not so well understood or established, and we did not want to hazard our general ordinance by putting the provisions of this special ordinance into it. have some fifteen or twenty districts established that way. This ordinance has never been before the court. It has been very satisfactory, and the people believe in it. Sooner or later we shall no doubt have a decision of the Supreme Court of the United States upon the subject.

We next put in a map enlarged to a much greater scale, covering a half mile right around the lot in controversy, showing the single family residences, and so on-there was a diagram of each lot showing the character of building on that lot. That interested the court. He had something to build about. We had to build up our case by expert testimony. We could not take individuals into court to testify as to the facts of the reasonableness of the zoning ordinance. We had to have experts. I put on the map experts, and then I put on the fire chief, and I had Mr. Aronovici there as our consultant, and had an insurance expert that I got from San Francisco, and all of these men testified without compensation because they believed in public service. I had a real estate expert, a subdivider, on the stand, and several other experts, and I am going to read to you a few of the questions that I asked those experts and their answers. I wanted to be able to argue from this evidence that this particular application of the zoning principle promoted the public welfare. the public health, and the public convenience. I embodied that proposition in my questions, so that I could get it into evidence, and be able to argue

before the court that an ordinance which provided that business houses and retail stores should not be in residence districts was a valid one, could be supported under the exercise of the police power as interpreted by the decisions of the United States Supreme Court, and in every way proper. The court, over objection of counsel on the other side. very strenuous objection, allowed these questions to be answered The case is now on appeal with all of this evidence in the record. I don't know that the case will ever be decided, but our ordinance is not in peril. I am telling you these things so you will be prepared if you ever get into court, or at least will know how we handled the case, by putting in expert evidence, putting in maps, having evidence of the public hearings and of the general uniformity of our ordinance, the fact that it covered the entire city and was not partial or discriminatory. If we lose this case, it will be only on the ground that the lot in question ought not to have been put into the residence district. Such questions are decided under the law of New York by a non-judicial body. They have boards of appeal for that purposethat isn't what they call them, but they have boards that hear these cases and decide whether a particular lot should be in a particular district or not, without going to the courts. Of course, in this instance, in California, the council has to do it. We cannot afford to have another board to sit in these cases. I want to say right here that during the two months that I have been in office, sitting with the council, one-half of the time of our public meetings is now devoted to the hearing of zoning cases. That shows the interest of the people in zoning. And every time any district is threatened with an invasion, one that will destroy or blight a particular block, the people come down by the fifties or

hundreds, looking for protection, and there is no question but that the zoning law of Berkeley, or any other reasonable zoning law, is going to stand. If I were to make a prediction, I would be willing to wager that it will stand longer than prohibition. (Laughter.)

That reminds me of an undertaker who came before the council only about a month ago, and petitioned to have his undertaking establishment moved, as his lease was running out. He wanted to move it about half a block to a very dilapidated house in the business district. The people came down to the council chamber and objected to the undertaker being there, and he got up and said, "Why, we are going to repaint this house, we are going to rehabilitate it and renovate it inside and out. We are going to make these funeral parlors dead swell." That much on the side.

Returning to the hypothetical questions, this is the question I asked the real estate expert-and to those who are not lawyers or councilmen, this may not be interesting, but I will try not to bore you with too many of these matters. There is not a great deal of it stated here, and it will be interesting to you, I think. This witness was Mr. Duncan McDuffie, the subdivider, one who has provided in his sub-divisions for parks, streets that are not too far apart and wide enough, something like Mr. Nichols of Kansas City, who has done so much for that great metropolis. We need men of that calibre in every city, who will look out for the future growth of the city and advertise it in the right way and look out for its aesthetic value. You can get a lot of your aesthetic values without legal procedure by the right sort of citizenship. Here is the question:

Q. "I will ask you if a municipality has by legislation zoned a city into residential, business and factory zones, and said city has a population of sixty or seventy thousand people in it, and an area of approximately nine square miles, if in your opinion would such legislation, assuming that it was based upon proper surveys and investigations, tend to increase and stabilize real estate values in that municipality?"

That is a hypothetical question, of course, and a proper one to be asked of an expert witness. And the answer was:

"Decidedly, yes. It substitutes orderly development for haphazard growth, and without question helps to stabilize and increase values."

That is the testimony of Mr. McDuffie, who knows something about real estate development. Then he is asked this question:

Q. "Assuming that such legislation created so-called residential zones or districts from which retail stores and factories, generally speaking, were excluded, would the creation of such residential district, in your opinion, promote the general welfare of the community?"

And he answered "Yes." There is my evidence, and I can argue all night on that. If the court had said "The objection is sustained," then I could not talk about it. A lawyer wants something to talk about, you know.

Then here is the insurance expert, a Mr. Torney, of San Francisco, who has adjusted as many losses as anybody about the city, and knows about insurance regulations. I wanted to get him, and he came over, made no charge, and took his time for it. We haven't any money in cities, you know, to pay for many things that we would like to pay for. This was the question I asked him:

"I want to ask you, Mr. Torney, one question: Speaking from your general knowledge of fire insurance rates and the fire hazard with relation to various kinds of buildings, is or is not the risk of fire greater in buildings used solely as dwelling houses or in buildings used as a dwelling house in combination with stores, assuming that all other conditions are similar?"

And his answer was: "The physical and potential hazard of a store is measurably greater than that of buildings occupied solely for dwelling purposes."

Then a further question on re-direct examination:

Q. "Would the rate of insurance on that building, on a concrete building on that location, be greater if it had stores in it than if it did not have stores?"

And he answered "Yes." There is the testimony. The reason for keeping it out of the residence district, keeping a store out of a residence district, is because it is going to increase the fire hazard of everybody else. I was there getting at the point of public safety. I have already got the question of public welfare and hazard. So here I put the fire chief on the stand, and I asked him this question:

"In your opinion, is the fire hazard greater in any apartment house or hotel if stores are maintained in connection therewith than it would be if there were no stores in the apartment house or hotel? Is there any difference?"

And he answered: "Yes, in stores. Of course, it would depend a whole lot on what the stores were to be used for. You take in most any mercantile establishments there is always packing and unpacking of goods, and there is always more or less inflammable material around; and then another reason is that in a residential district there is somebody there at night, at all times, day and night, and in the mercantile district, as a rule, after stores are closed, there is nobody there that will discover a fire."

That was spoken from his experience.

He was cross examined at great length, and they tried to break him down. It is interesting to note that they did not succeed.

Then I put on the city planning expert, Mr. Aronovici. He qualified all right. You know that you have to ask your expert witness his experience before a court will allow him to testify. Then I asked him this question:

"As an investigator of municipal housing conditions, and city planning and consulting, I will ask you if, in a city having a population of fifty or sixty thousand inhabitants, and having a total area of nine or ten square miles, an ordinance were in effect and in force dividing the city into residential, business and factory districts, and in such residential districts, no new business stores of any kind were permitted to be built or maintained, whether or not, in your opinion, such enforced regulations would tend to promote the public welfare and safety?"

And he replied, "I should say that, in my opinion, it would." Then I asked him "Upon what would you base your opinion?" and then he goes on to say it is based upon some studies he had made in St. Paul and other places. You don't want to put an expert on the stand unless he can sustain his opinion. All that you have prepared beforehand.

I see that my time is going. I was going to say this: That the success of city planning in your city, or in any part of the United States, is going to depend largely, as Judge Stephens says, upon the attitude of mind with which you, as a councilman, sit upon your board. It is my advice to you that you do not make up your mind about a particular question that is before you in a committee of the whole behind closed doors. Hold it open until the case is submitted to you in open session.

(Continued on page 443)

The Development of Regional Planning and Subdivision Control

By G. GORDON WHITNALL, City Planning Director, Los Angeles.

Mr. Whitnall: The subject of regional planning is rather a difficult one to encompass within 25 minutes. I shall resort to the relation of an experience rather than to give the subject in its abstract form. By way of preface, however, I might suggest that, though regional planning work has in a sense advanced to rather a high state on the Pacific Coast, the necessity for it was first conceived in the East. Whether that was done consciously or not, nobody seems to know. We find, however, in the creation of the Metropolitan Sanitation District about Boston, that there was a recognition of the fact that in sanitation was one subject, the problem of which, and results of which, did not recognize arbitrary man-made boundary lines of municipalities. Chicago, that work is now advancing rapidly in connection with the provision for future recreational facilities, in which the fact is there now recognized that, if the recreational facilities of the future are to be adequate to a future need. that there must of necessity be provision made to-day, and that unquestionably the future will comprehend more territory in the metropolis of Chicago than is now the case. So that there they are approaching the subject from a metropolitan standpoint as distinguished from a purely municipal standpoint.

In the city of Milwaukee, they have probably gone further than any other one city in the country along this line, and they are not alone planning for recreation from a metropolitan standpoint, but also traffic facilities, as well as

sanitary drainage and including now, quite conveniently, the subject of zoning. In other words, they have first expressed definitely the thought that the city of Milwaukee, large as it may be to-day, from a metropolitan standpoint includes also the surrounding cities and the intervening territory. And in this manner, subjects of community concern, such as zoning, sanitation, traffic and recreation are considered, with the thought that the solution of the metropolitan problem is to be found only in its conception upon a metropolitan scale, and that, in approaching it from that standpoint, they will probably solve the varying problems more efficiently and certainly more economically.

Coming then to the Pacific Coast, the thought has arisen also that we should insist upon a larger scale development than is permitted if we confine our thought to corporate boundaries of any municipality. And it is at this point that you will pardon me if I make reference to our own experience in and about Los Angeles.

When, three years ago, city planning was first seriously considered in an official way, we early recognized that if it were conceivable to launch upon and accomplish a city planning program for the corporate city of Los Angeles that would be 100% perfect, yet in the larger viewpoint it would be weetfully lacking in its completeness, in its efficiency and in its economy, if provision were made for just the city of Los Angeles and the metropolitan district could not be projected out into the

metropolitan area surrounding

As an indication of the means through which that consciousness came to us, let me be specific. We were considering general problems of traffic and there came to our attention an experience in connection with the improvement to which I shall now refer, Washington Street in the city of Los Angeles. There is a section of Washington Street that lays just inside the boundary line of the city of Los Angeles, about a mile and a half long, that for years was in a state of disrepair that was scandalous. Three times to our knowledge, our City Dads endeavored to secure the improvement of this important link in our major highway system by initiating improvements under the improvement act, and three times it was protested out by almost an unanimous protest. Finally we resorted to the 1911 act, and the thing is now accomplished. But what was the procedure through which we went: what was the indelible mark left upon the vicinity, and what was the lesson to us from a regional standpoint?

Here was a section of the street that, through the accident of political boundaries found itself in the city of Los Angeles, and which was a part of the city street system. But because of its location in respect to the city of Los Angeles, and to the west coast district and the cities therein, and to all that territory north and south and east. that section of a city street was, in fact, functionally and physically speaking, a unit in the county and state highway systems. And because of that fact, it was called upon to accommodate a volume and tonnage of traffic far in excess of what would have been required had it been the street a block to the south. That necessitated a greater width and a more substantial type of improvement, both of which added very materially to the cost.

Now, under the theory, and I emphasize "theory," of our State Improvement Act, we were forced to exact the cost for that improvement disproportionment to the benefits we could ever claim would result to the frontage. Naturally the frontage protested it. Now, if that had been a unit in a city and county highway system, and perhaps a state system, the necessity of it to the greater community would be apparent and then the frontage would have no right to protest that improvement out. On the other hand, if the community, which demanded, and was going to insist upon that improvement was going to ask a few individuals, merely through the accident of their location, to pay the bill for all of us, then obviously we had no right to deny them the right of protest. And yet we did that.

From observing that one case, and I might repeat that in dozens throughout the city of Los Angeles alone, we came to a recognition of the fact that here, in traffic provisions, was another subject in which the difficulties of financing, the difficulties of design, the difficulties of maintenance were much larger and more extensive than the municipality's viewpoint. We, therefore, proceeded in our own way, to engender, if possible, in the minds of our neighbors, and in our own minds, a realization of the fact that there are several subjects that constituted problems common to all of us, and the solution of which is possible only to the extent that we co-operate. In other words we gave expression very definitely, consciously and intentionally to what we have been pleased to term a new declaration in this case, a declaration of inter-dependence; and there has sprung up, and there is now definitely in existence, so far as we know, the first regional planning movement of an official in the country. That is rather a broad statement and vet it is quite true. so far as we know. In Massachusetts around Boston, there are metropolitan districts for the handling of such subjects as sanitation and recreation. In Chicago and Milwaukee there are metropolitan districts for certain subjects, and now under the guidance of the Sage Foundation, in Greater New York and its surroundings, a greater regional movement is under way. Notwithstanding those facts, the application of the regional principle as applied to specific problems, here on the Pacific Coast, again, as with many other subjects for the first time. it has remained for us to co-ordinate all the elements in one compact movement.

With that general bird's-eye perspective of the interesting relationship of municipalities and intervening county territory, all of which comprise a metropolitan district, you can get a conception of unity. Then only are you in a position to proceed upon internal planning. And when we consider it from that angle, there comes to our consciousness the importance of the subdivision. The subdivision many now believe, is probably the most potent element entering into the consideration of construction of any community. Because, if we might make popular reference to a scientific fact, we might speak of the subdivision as the molecule, composed of the various atoms, of the elements constituting it. Whereas in a molecule of water, we find H2O (two parts of hydrogen and one of oxygen) in the subdivision molecule, you have the component elements of street width, street pavement, curbs, gutters, sewers, water mains, lots as to size, area, shape, location and all of the physical things that constitute a community in its entirety, are found in some respects in the subdivision. If I may make another parallel, I might mention the subdivision as a little lot in the Metropolitan mosaic

picture, when it comes to the usual mosaic that you find upon the floors of famous places. In the past it has not been the practice to design or mentally conceive the pattern of that mosaic all at once. Now, however, that is becoming a more important factor. With the mosaic pattern in mind or on paper, it becomes more or less of an automatic function to see to it that one of those little blocks of mosaic when placed, wherever it is placed, shall be such in its size, in its application, if you please, instead of color, and in its general arrangement, so that finally when it shall become entirely surrounded and contiguous with other developments that it and all of its neighboring units shall contribute each its own share in an orderly, consistent and economical development of the greatest community. As a matter of fact, if I may be permitted to use here an illustration that I have so frequently used at home, I will say that a subdivision is to a city much as a brick is to the building, except for two very outstanding differences, the first difference being, that in the case of the brick, it is the custom to place the brick upon the foundation, and then, in order, pile them one on top of the other, and out of the bricks you create the wall, and out of the walls the building, whereas, with the subdivisions, the problem necessarily is to place them one beside the other on a reasonable plan The other difference lies in the fact that, in the case of the bricks, it is a physical impossibility to put one upon the ground, and then the next one high above, and then begin to fill in between, because bricks don't work that way. But subdivisions do work that way. You put one to-day in the center of the community, and another one perhaps ten miles to the east, and then another one to the west, and then another one

(Continued on page 445)

Acknowledging Art as an Objective of City Planning

By JOHN W. MITCHELL,

President of the Municipal Art Commission of Los Angeles.

Mr. Chairman and Members of the Convention: I deem this occasion of so much importance, as I do likewise the subject I have chosen, that I have committed to writing what I have to say, although I would much have preferred to speak extemporaneously—yet I like to prepare my extemporaneous remarks as carefully as this.

What I have to say is in the main, but repetitions of the things that I have been saying for more than thirty years in one form or another to the people and taxpayers of Los Angeles and of California. My only purpose heretofore and now is to serve the public weal in urging a civic betterment by awakening in private and official life the deep seated art spirit and aspirations which, I believe, are only dormant.

Primarily, my theme is Civic Art and its relation to city planning, wherein I shall endeavor to show that art is the paramount objective of city planning, but before entering into its specific phases, and since I am so fortunate as to have for my hearers representatives of the official life and authorities of the municipalities of the great State of California, I am going to try to emphasize the need and obligation of public officials to foster and encourage art. and to this end and to emphasize the importance of Civic Art I am going to make to you a bold statement and challenge. It is this:

If by my words or acts I could awaken the official and governing minds and consciences of the cities, towns and communities of California to the high importance of giving full support and expression to the arts in the life and embellishment of this greatest of States, I believe that I would render this people and this land a greater benefit than could be derived from any other single source. More than would be created by any single industry; more than all that would be rendered by all the Chambers of Commerce and the other commercial and civic bodies; more even than your educational and scientific institutions.

This may, doubtless, seem to many a most extravagant statement, but let

In presenting views touching the relation of art to city planning it premises the inquiry: What is art? And what is City Planning? Are both as important as is claimed, and does this importance justify the consideration asked for both?

What is art? Briefly defined, art is the study and expression of beauty. Art is universal. Art is for all times. If history does repeat itself, then its greatest good will continue when everything else is passing away. The asthetic side of man's nature which art endeavors to satisfy speaks everywhere harmony, fitness and proportion. It is his innermost subconscious craving. It is expressed when he whistles an air, or paints a landscape, fashions a piece of sculpture or designs an architectural masterpiece.

I am not going to attempt to answer the question as to the importance of art by my own opinion, or by the recital from ancient times of the opinions of the great authorities upon art, that have passed from the earliest period of Hellenic Art, through all the ancient and modern schools, but content myself with quoting one authority, the latest, that all here must respect and regard whether they concur or not. I read from an editorial of July 21st last in the Los Angeles Times, considered one of the greatest daily journals:

"SCIENCE BOWS TO ART"

"After a lifetime devoted to invention and scientific achievement, Thomas A. Edison announces it as his belief that art is far more vital to the world than science. He cites as an example of the greatest contribution ever made to the human race the art of ancient Greece. Down through the centuries this has come to inspire and uplift mankind, but the inventors of that period, Edison remarks, are totally forgotten.

"Since that golden age there have been inventors of varying degrees of greatness, but most of them are speedily forgotten by the multitude. The reason, the wizard of science states, is that they contribute to the material welfare of man, whereas the artist appeals to his spiritual side. 'The great scientific discoveries,' he gloomily asserts, 'have enlightened some people, only some people, not the whole world, or the whole of America. Making money is one thing; the puny decorations of to-day are to make money. But art is another thing-art is the great thing.' "

To me this is a most significant statement coming from America's greatest scientist. It is entitled to the utmost respect, when behind it is the fact that it was recently estimated that Edison's scientific inventions have added sixteen billions of dollars to the world's wealth. After a long life of scientific research and invention running through all the realms of science, that this great mind, in a deliberate opinion should declare that art has done more for the world than science, should indeed make us pause and be willing to give more respect to the appeal of art. And that his opinion should be thus voiced and endorsed by a publication of such known commercial endeavor and mundane appeal is almost an equal phenomena. Indeed, this opinion from such a source and promulgated through this medium should give all who are devoted to art. in any of its phases, encouragement to continue an enthusiastic and at times a seemingly foolbardy effort in behalf of the arts.

Just here I want to interject a note in reference to the contribution to local art made by General Harrison Gray Otis, founder and upbuilder of "The Times." I venture the assertion that the dedication and endowment of his old home in Los Angeles to the establishment of the Otis Institute of Art—a public school of Art and Design, will ultimately prove to be the capstone to the fame and reputation of this noted man.

The Department of Art I want to emphasize here is Civic Art.—Art for the municipalities. Civic Art is that expression of the fine arts in the paintings, in the sculptures and in the architecture of or pertaining to cities. It applies to the statues, paintings and municipal structures possessed by cities as well as to all artistic plans and effects constituting and being a part of their artificial ornamentation and their art values and assets.

The monuments, the statues and the great buildings of past ages are the milestones of civilization. They were generally reared to commemorate some historical event, to express civic pride or the religious zeal of the people, or to

perpetuate the deeds of some ruler or dynasty. When these evidenced the practical application of asthetic principals in conception, construction and location they not only added to the beauty and dignity of the period, but gave it its culture and standing. Thus, the fame of ancient Thebes, Babylon, Jerusalem, Athens and Rome have been impressively marked upon the records of the past, and the fragments of the statues, and the ruins of their great structure are the records which proclaim their achievement, their grandeur and their civilization. If these great cities had not left their monuments, their sculptures and their ruins of buildings and thus written their history in marble. stone and bronze there would be no palpable evidence of their greatness to impress the world to-day, and their history would seem but mythical tales of the long ago.

The example of the great cities of ages past teach that the sculptors, the artists and the architects with the artisans who labored to carry out their ideals were the enduring historians of the past. They expressed civic art by their work, and civic art best tells the story of the lives and achievements of the ancient people.

Does it not, therefore, follow that it is desirable for cities to rear monuments that will fittingly record historical events, statues to commemorate heroic and able achievements and erect great buildings to give dignity and facility to public service, and all for the utility, beauty and glory of the civic history of the communities.

The cities of the world are awakening to the artistic needs. There is a spirit abroad to make cities beautiful as well as to comprehend great areas and increased population. It is being realized that the quest of cities should not be alone for population, not only for the development of its commercial and financial interests. It is beginning to dawn upon this western sphere that beauty is a city's greatest asset, and our cities are being forced by a healthy competition to realize this more and more. In latter years much has been done to ornament and beautify our cities. And to-day there is hardly a city that is not working out, with expert assistance, some concrete plan for remodeling and rebuilding upon modern and artistic plans.

Only last year I was fortunate enough to be able to revisit Paris. This beautifully ornate city I found still following the precedent of ancient cities, like Thebes, Babylon, Jerusalem, Athens and many others of ancient times, and wisely using their experiences, as to the value of Civic Art and beauty, as an aid to material wealth and advancement. The people of France both wise and artistic and above all economic, know the value to the private purse and public treasury of the sojourner attracted by its art, its recreations and amusements. Her people and her government, not dismayed by the terrible and untold ravages and desolation of the most destructive war of all times. have launched a program of permanent and artistic municipal improvement which ought to be an inspiration to the municipalities of the world.

In spite of its enormous sacrifices during the war, in spite of the increase of its debt during five years of a general paralysis of its activities, Paris has not hesitated to take up again its program of embellishment and development interrupted in 1914. A law was passed even during the war compelling every municipality of France to make a plan of its layout, embellishments and extensions. A public competition for the improvement and embellishment of Paris was held immediately after the war.

It was divided into four sections corresponding to the various works the city had to carry out in order to meet the necessities of the development. These were: First, general Paris ensemble; second, interior improvement and embellishment of Paris; third, improvement of the fortifications, and fourth, miscellaneous projects.

You will observe this plan carries not only fundamental improvements, but a replanning and remodeling. The details for this whole plan for the improvement of Paris possesses many fine and fascinating features. It combines, as all plans for the embellishment of a city should, the practical with the asthetic. It calls for a superb conversion of its ancient outside defenses which the late war proved obsolete. But my investigation disclosed one outstanding fact, which should be of interest and value to municipal authorities. Upon consulting the statistics as to the value of land in Paris before and after carrying out many important street, park and boulevard improvements, solely with a view to embellishment, it was disclosed that the more radical such improvements the greater has been the return. and the expenses incurred always resulting, not in a burden to the city, but in increased prosperity.

Now as to the relation of Civic Art to City Planning—City Planning provides the design—the layout as it were—the ground plan of a city, its physical structure, including the essentials of sanitation, traffic activities, the location of its utilities, industries and homes. It lays the foundation and directs the practicalities of the structure. The main principle in the making of a good plan for a city is not to separate the questions relating to sanitation or utilities from those that are purely asthetic. It is the part of Civic Art to embellish and adorn—to make beautiful its super-

structure. Therefore, City Planning and Civic Art co-ordinate and the one compliments the other, and, fortunately, this is being recognized in those communities that are eminently progressive and have established the machinery for both City Planning and Civic Art.

We are, unfortunately, forced to admit that in a majority of the cities of California there has been a woeful lack in City Planning. Therefore they are without comprehensive systems of streets, boulevards and traffic arteries. They have insufficient breathing spaces, such as squares, playgrounds and parksand these they have are often, unfortunately, badly situated or rather disproportionately located. The public buildings lack architectural merit, and are unfitted and inadequate for the public service. Too often the public buildings are wrongfully placed, their location not being fixed by the convenience of the public and the fitness of the site. but rather by political influences and special interests.

The city without a city plan and civic art may be likened unto a boy that will outgrow his short trousers before his long ones are ready. But there comes a time in the life of modern cities, as in the life of the youth, when the habitaments of youth must be cast aside. To provide for future growth and progress there must be comprehensive city planning as surely as the youth will demand long trousers. And in city planning you cannot begin too early. Every day's delay makes it more difficult—because more expensive.

The bi-annual budget and appropriations of the State of California provides for the expenditure of nearly one hundred millions of dollars; the annual budget of the municipalities of the State in the aggregate also provides for the expenditure of other hundreds of millions of dollars. All contributions of the taxpayers. But only an infinitesimal part of the grand total will be expended for civic art or art betterment and city planning. No artists or sculptors will be enriched on account of the purchase of their works. Only a small number of local architects will receive therefrom fees for the design and plans of acceptable public buildings of a permanent or monumental character. the financial budgets, state and local, there are too meager items for art A large body of residents, citizens and taxpayers attracted to the cities of California by the inviting climatic conditions and for home making. and many of the so-called leisure class, moved here from elsewhere, as well as many of the argonauts and natives. would like to see their cities more artistically embellished and adorned. Many are large tax contributors, but they have no return in this respect in public expenditures. It might be said they are in fact taxed without representation, a condition unpardonable to citizens of this Republic-in city, county, state or nation. If budgets are to be cut or paired it is art appropriations that are eliminated.

Art is undernourished. It exists upon the scraps thrown unwillingly from a sumptuous board. It hungers for recognition and encouragement from the private purse and official patronage. It surely needs both, but cannot demand what it deserves. The official and public minds have nearly always undervalued the importance of art. Engrossed in the struggle for sustenance and the utilities the creation of art is lost sight of as a basic element of construction and of life.

It is now beginning to be fully realized by the thinking public that it is time for cities to adopt a wide, broad, extensive and consistent scheme of civic improvement along modern and well proven rules for city betterment, and along artistic lines; that it is time to turn a little from the practical to the esthetic, from business to culture; that it is time to take steps to add to the commercial accomplishments, the advance steps necessary to establish artistic, intellectual and scientific centers, for which nature has assisted by preparing an unsurpassed setting.

And after all in some cities—notably Los Angeles, it is perhaps fortunate they have not heretofore attempted to provide themselves with these large and comprehensive municipal establishments, for it is hardly probable they would have been sufficient for the coming generation and ages. It would have taken inspiration rather than wisdom to have foreseen the progress and growth of this commonwealth and many of its municipalities in the last decade.

Be assured the people want great public buildings, erected upon fitting sites, including libraries and art galleries, with superior paintings and sculpture representing all schools and periods; auditoriums and stadiums or coliseums for developing the bodies of our youths: all to be monumental and in some way recording California's romantic past and the prophecy of its great future. For our squares, parks and open spaces there must be statues and fountains of bronze and marble. By thus adding to the beauty of nature the ornamentation of civic art there will be realized some of the ideals of the patriotic art spirits who have labored to add to the fame for beauty of all of California. I say all of California-for I am one who believes that the glory of California is the whole of California.

But I repeat and urge that all of California should have a well defined municipal plan for its development along practical and artistic lines. Visitors often ask: Why are the cities of Cali-

fornia so lacking in Civic Art? And I repeat this query. Is it for the lack of appreciation of art? If there should be any so sordid and narrow as to fail in due appreciation of civic art, they should be reminded that ancient Rome, at the height of her civilization, had sixty thousand statues-a statue for every thirty-three inhabitants. Indeed, it was said, that Rome had two populations of equal size-one alive and one of marble. And to-day fragments of these statues are delved for in the ruins as though they were priceless jewelsand so they are. Now in contrast! The miracle city of Los Angeles, with all its fine ambitions, cannot boast of one really meritorious and artistic statue for its million inhabitants.

Further, I would remind the critics, if there should be any who would say that the public funds used for civic art are unwisely expended, that it required the collected energy of a thousand years to reap the art of Greece and that she only reached her zenith when Pericles, that great statesman and ruler, diverted the war funds contributed by the four independent states of Greece for their united defense, to build the Parthenon and erect the statues and temples of the Acropolis. He was charged with misappropriation of public funds and was banished, but he justified his acts before the people and his wise and generous patronage of the arts has rebounded to the glory and embellishment of the world, and has benefited mankind more than the boasted victories of heroic Greece at Salamis or Marathon. No, I dare declare that a thousand victories by war and bloodshed would not equal the value of one of the great masterpieces of art.

It is a paramount duty of governments, by wise legislative appropriations of public funds and liberal administrative recognition, to further the arts and crafts. The benefits accruing to other countries set an approving precedent. Let me ask how insignificant would be the interest of the world in general in Athens, Rome, Florence, Venice, Milan, Pisa, Dresden, Madrid, Paris, London and other lesser places of Europe, and the ancient cities of Asia and Africa, but for the architecture and civic art which their governments have at some time provided. Thousands upon thousands from all the world annually journey to the lands where art In Europe thousands is enshrined. return annually to distant lands solely for the purpose of again viewing some renowned building, painting or statue.

In California we must supplement our natural beauty by the beauties of art. There must be created monumental grandeur. Only think that all history does not record an enduring center of commercialism; but it does record enduring centers of art.

The collective signs and tokens of outward show mark the character of the people forming communities. The busy marts of trade, the hum of machinery in the factories, the immense warehouses and emporiums filled with merchandise, the modern palaces of finance, the crowded avenues of traffic, all indicate the extent of their commercial life and wealth. Their homes portray individual thrift, pride and refinement. Their architecture, the bloom and foliage, vistas, fountains and statues, of parks, boulevards and open spaces, the paintings and sculptures and other objects of art in galleries and museums, attest progressive civilization and culture. And how vitally important is culture! Larmantin said: "Man is born barbarous, he is ransomed from the conditions of beasts only by being cultivated."

In conclusion, I thank you for your consideration and the opportunity of appearing before this body of high

officials, upon whom, it can be said, the future development of California more nearly depends than any other class or body of its citizenship. Future progress relies upon official wisdom and action in all the endeavors of life. Here, within the confines of this imperial State, is a treasure house of raw material unsurpassed in all the world. How it shall be mined, cultivated, gathered and garnered, and into what form it shall be worked is the problem that official life can direct and control for the equal pleasure and profit of all.

President Merritt: Having listened to the discussion of the various topics under the general head of Zoning by experts, taking up one feature then another, the matter will now be thrown open for general discussion before the convention. If anyone has a new idea, or wants to know something in particular about a subject from those who have addressed us, now is the time to bring it up.

Mr. Pomeroy of Long Beach, Secretary of the Regional Planning Commission: On the basis of what Mr. Whitnall has said, and referring to the new work of regional planning, I simply desire to extend to the League of California Municipalities the greetings of the Los Angeles County Regional Commission. One of the other members of the Commission was in attendance at the opening of the convention, but had to leave There is one thing I would like to emphasize, however, and that is the need for a basic legislative act. In Los Angeles, the work is carried on as a function of the county government. It is not possible to establish metropolitan control by setting up an entirely separate metropolitan governmental agency. It is purely a function of the county government. We are dealing with forty or fifty unincorporated towns and forty-two incorporated cities in the

county. And so our work is based entirely upon an education of the citizenship there, and developing a public opinion. Our plans are carried forward by the exercise of the county authority within the jurisdiction of the county government, and by the co-operation of the municipal authorities within municipal limits. We find that by developing a proper perspective of the subject, that individual jealousies and contentions disappear, and we are all working on the same plan and working out the same program. I could go into the detail in regard to the functions and work of the Commission, but that is hardly essential at the present time. We do find this thing, that our work is handicapped to some degree by the lack and need of certain State legislation. I had the opportunity and the privilege of serving in the last session of the Legislature, and I will say this in consonance with what the secretary stated vesterday, that the power of the League of California Municipalities at Sacramento is not what it should be. I hold the League of California Municipalities in high esteem in what it is trying to do throughout this section. But, while here are lobbies and representativest of every other interest in the State of California that make their influence definitely felt on each individual Legislature, so much so that we have hardly had to buy our meals individually while there, there was no talking lobby on the part of the League, and the personal influence of the League of California Municipalities was not present to assist me in my endeavors to serve the interests of progressive municipal legislation in the State. I do not know whether I will go back there two years from now or not. I haven't consulted the voters about it. But I do know that Legislators who are definitely interested in furthering the kind of work the League is

interested in need stronger backing during the session. And what is more important than that, there is needed the building up of a public opinion.

The Los Angeles Regional Planning Commission, we believe, is carrying forward a notable and glorious work. And we stand in the position, relative to this body, of having our ears open and ready to receive all the assistance that we could possibly get in carrying forward the work there, and throughout the State of California.

Mr. Beck: I want to say that persona'ly I am delighted with these splendid addresses, that they have given me great inspiration that I shall take back to the city I come from-Long Beach. Just one question concerning zoning. We are confronted constantly before the city council, and a considerable portion of our time is taken up, by the problem of re-zoning properties. We had before us, at one of our council meetings a particular plot of ground, situated some several blocks away from the center of town, and they wanted to change the character of improvements to an eight story building. I voted for it, but under protest. I want to ask: Do the majority of the people in any one particular community place the responsibility upon the planning commission, or upon the city council in sanctioning the recommendations of the planning commission? I am frank to say that I hope the city planning commission went out and looked at that particular piece of property. I would think if they had gone out, they would never have brought in the recommendation to have an eight-story building there. But some of the city planning commission being lay members serving without pay, it has been the policy of the city council, in a large measure to acquiesce in what the city planning commission suggested. I really felt that I could not conscientiously vote for that eight-story building, even though the people most directly affected, those on the north and south, came in there and said before the council, "We are in favor of changing that zone." I query whether a city councilman should assert somewhat his independence, irrespective of what the planning commission may recommend, when, in his own mind he thinks that that which he is trying to do is wrong. I wonder what the others think of that.

President Merritt: As I get the question, Mr. Beck desires to know what the general policy of other cities is in regard to taking the recommendation of the planning commission upon the subject of changing zones.

Mr. Beck: Yes.

President Merritt: Will someone answer that question?

Mr. Aronovici: I think it depends largely upon the type of city planning commission that you have, in other words, what experience it has had, and to what extent it has been educated along those lines. We have in one city a city councilman who insists we ought to have on the city planning commission a gentleman opposed to city planning, that is, who would naturally work against any decision that they might make. Generally speaking, the city planning commission has no time to go out and make a careful study of the situation, therefore they are likely to make mistakes in making recommendations. But for that reason some cities have been having difficulty, through the city council, in getting acquiesence in their decisions. If you will study the recommendations, you will find that the decision of the city planning commission becomes more and more in harmony with the city council, but it takes a considerable time to work out a harmonious scheme based on actual facts. I hesitate somewhat to suggest that the signatures of the people in the particular neighborhood are worth practically nothing, for the simple reason that some people will sign almost any-We have had experience by people who would sign a petition, and then within 24 hours they did not know what was in the petition, and they did not understand, would we please take their names off. We have had as high as 50 per cent of the original signers withdrawing, and others not withdrawing because they were ashamed to own up that they had signed the document without reading it And acknowledging that they did not take the alleged wisdom of those who desire improvement, but, when there are discrepancies between the city planning commiss on and the objecting property owners, then the plan is to go out together and view the premises, and I believe they could then reach a definite conclusion.

President Merritt: I might tell Mr. Beck how we do it in Oakland, so he would not be placed in the position of not taking his own recommendation. Our city planning commission consists of the Mayor, the other four commissioners, the city engineer, the city clerk, and the architectural engineer, and so, generally speaking, the city council takes its own recommendations as the planning commission.

Mr. Arnovici: The difficulty is that a good city planning commission may

not agree with a city council.

President Merritt: Then the city council could do away with the commission and create itself as one.

Mr. Ashburner, City Manager of Stockton: I can't speak for Stockton, Mr. Chairman, as I have only been there a week. But in the East, we had a planning commission consisting of three engineers with a large advisory body, composed of representatives of various organizations, an advisory board. The purpose was to give a larger base to stand on, and to bring the various organizations in close contact with the city planning commission. They had no vote, and the decision of the city planning commission on such changes as have been mentioned, went through the city manager and the council. found that it was very difficult to get any marked decisions as to the advisability of changing the planning laws. I think with a planning commission made up of practical men, backed by business men and representatives throughout the community you will not have that tendency to change on petition as has been suggested.

Mr. Bidwell of Sacramento: Sacramento have solved the question and gotten away from the planning commission quite successfully, by having a committee of the council handle the planning, with the assistance of a professionally appointed engineer. Five months ago, after about six or eight months' work, we adopted a comprehensive ordinance, going into all phases of use. We haven't undertaken the set-back lines or the height of buildings to any great extent. Since the ordinance was adopted, at various hearings in five months, we have had not more than a half a dozen hearings on a request for a change. There have been a few complaints, but practically none. Nearly everyone that has come up there has been easily satisfied, and, without having to refer to the planning commission, the committee having in charge the matter has taken charge of the work very satisfactorily. And we find that, while we may in a year or so, possibly less, have to modify the ordinance in some respect, we have accomplished a great deal, and people are generally satisfied. We distributed, I think, a thousand,

(Continued on page 439)

City Managers of California Organize

By CLIFTON E. HICKOK City Manager, Alameda, California

At Coronado, California, on September 12, 1923, the city managers of the State of California, who were in attendance at the annual convention of the League of Californ'a Municipalities, formed an organization to be known as the city managers' section of the above named League. There are now thirty-one cities in California under the city manager form of government and it was felt that the time had arrived for the city managers of these cities to form an association There were nineteen city managers present at the Convention, as follows:

Coronado Tom J. Allen Chas. E. Ashburner Stockton C. Arrasmith Fillmore R. M. Dorton Pittsburg John N. Edv Berkelev C. B. Goodwin San Iose Clifton E. Hickok Alameda A. E. Hitchcock Santa Rosa Paso Robles W. W. Hughes C. W. Koiner Pasadena Tulare George S. Lewis Grant M. Lorraine Alhambra I. A. McVittie Richmond South Pasadena R. V. Orbison B. I. Pardee Visalia C. F. Price San Mateo E. A. Robinson Redding O. E. Steward Anaheim

The meeting was held at the luncheon hour in the dining room of the Coronado Hotel. Each city manager arose and introduced himself, giving a brief synopsis of his history and a few remarks regarding the city he represented. A general discussion followed regarding the advisability of an organization being

Marysville

I. O. Wanzer

formed. Opinions were expressed that since the city managers were perhaps more intimately connected with all the various functions of a municipality than were any other group of city officials. that a separate section of the League of California Municipalities should be organized to be known as the city managers' section. It was also made manifest that a very great mutual benefit would accrue to the various city managers by the personal contact to be obtained through such an annual meeting; and that furthermore a consequent benefit to the various cities would ensue through the resultant exchange of ideas.

The organization was perfected and the following officers elected to serve for the ensuing year:

President—Clifton E. Hickok of Alameda.

Vice-President-C. W. Koiner of Pasa-

Secretary—R. V. Orbison of South

A motion was made and carried that the President send an invitation to the National City Managers' Association, which is to be in convention at Washington, D. C. in November, to hold their next annual convention at Pasadena, California.

A committee was appointed to draft a code of ethics for city managers, to be presented for discussion at the next meeting of the State organization. Mr. Grant Lorraine of Alhambra was appointed chairman of this committee to be assisted by Messrs. C. B. Goodwin and R. M. Dorton.

The State of California prides itself on

being second only to the State of Michigan in the number of city manager cities. There are now thirty-one cities in the State under this form of government, having an approximate combined population of half a million. The cities of California under the city manager form of government are as follows:

Alameda Paso Robles Alhambra Pittsburg Anaheim Redding Avalon Richmond Bakersfield Sacramento Berkeley Santa Rosa Calexico San Diego San Jose Coronado Chico San Mateo San Rafael Fillmore Santa Barbara Glendale Long Beach South Pasadena Martinez Stockton Marvsville Tulare Pasadena Venice

Visalia

Of the above thirty-one cities under the city manager form of government,

sixteen have city manager charters, while in fifteen the city manager was created by ordinance of the city council. Practically every charter now being adopted in the State is a city manager charter.

The city manager profession of California has recently been stimulated by the acquisition of one of the most distinguished members of the profession, namely Mr. C. E. Ashburner, the first city manager in America, recently city manager of Norfolk, Virginia, and since September 1, 1923, the first city manager of Stockton, California. Mr. Ashburner's reputation and worth are evidenced by the salary being paid him by the city of Stockton, namely \$20,000 per year.

The city managers of California are extending to Mr. Ashburner a most hearty welcome, feeling that his presence in the State will do much to elevate the profession and to develop a greater appreciation upon the part of the layman, as to the advantages and possibilities of the city manager idea.

TO CURB MOTOR EXHAUSTS ON FERRIES

In order to eliminate in so far as possible the escape of motor exhaust fumes on ferry boats, the California State Board of Health at its meeting held in San Francisco, October 6th, adopted resolutions for the regulation of automobile traffic on ferries. This procedure was made necessary because of the growing dangerous practice of releasing poisonous exhaust fumes within enclosed spaces on the boats. The regulations are as follows:

In order to eliminate, as far as possible, all unnecessary automobile exhaust fumes within auto ferries on account of the poisonous and offensive nature of the gases,

- Motors shall be stopped as soon as machine is parked on the steamer and shall not be started until steamer is docked and line ahead has begun to move.
- 2. Motors shall not be "raced" or the gas mixture unnecessarily enriched while the vehicle is on the steamer.
- 3. Doors at both ends of steamer shall be opened before the steamer reaches the slip.
- 4. Uniform signs shall be conspicuously placed on all auto ferries so as to be legible from the driver's seat of all vehicles.

Report from City Engineer of Outremont of First Test of Decarie Automatic, Non-Stoking Incinerator

Submitted by F. L. DECARIE

CITY OF OUTREMONT

Outremont, Que., March 18th, 1921. Office of the City Engineer and Manager.

F. L. Decarie, Esq., Decarie Boiler & Incinerator Company, Montreal, P. O.

Dear Sir:-

At your request, I am pleased to give you the following information concerning a test made at our new Decarie Incinerator on February 15th, 1921.

At 7 a. m. that day, the fire was started on lower grate without the aid of any combustible, outside of the wooden boxes and paper gathered in the ordinary way with the domestic garbage and refuse, and the addition of a few broken boards and sticks.

Twenty-eight tons of garbage were destroyed during the test, which lasted practically 18 hours, the last load going in the hopper at 10:45 p. m. It was observed during the whole test that the plant was capable of destroying more garbage than we had on hand, and I think I can safely say that it was demon-

strated that the capacity of the plant is of at least two tons of garbage per hour, which is better than the guarantee. The idea of having two suspended movable basket grates over the lower fixed one is excellent. This arrangement permits the drying out, almost completely, of the green garbage on the upper grate, depending on the time this garbage is allowed to remain there. Then, when the garbage is dropped on the inter-

mediary grate it can again be dried out if found necessary, or stored there before finally dropping on the firing grate. The flexibility of the plant in this respect is very remarkable. The fact that the suspended basket grates are movable and are operated by means of hydraulic cylin-

ders is a great saving in labor. It was found that one man can easily control the dropping of the material from the two suspended grates with great ease and in quantities desired. He also attended single-handed to the stoking which is reduced to a minimum in this plant.

The ashes, clinkers and tin cans drop into a hopper which is emptied once or twice a day into a small car without any more handling.

The average steam pressure during the day was 80 pounds, but it often went up to 100 pounds. The amount of wastes for this day's operation were weighed the following day, and were found to be:

Tin cans.....

11.526 lbs.

Yours very truly,

J. A. DUCHASTEL, City Engineer and Manager.

TEST REPORT OF DECARIE OSCILLATING GRATE TYPE INCINERATOR LOCATED AT OUTREMONT, QUE.

Total cost of operation
Condition of smokeWhite
Total water evaporated
Total water evaporated per hour3,290 Lbs.
Total water evaporated per pound of
garbage1.05 Lbs.
Equivalent water evaporated from and at
Equivalent water evaporated from and at
212 degrees
Total ashes taken from plant6,070 Lbs.
Ashes per ton of garbage consumed217
Average steam pressure
Total residue from 28 tons
Total residue from 1 ton
Total clinker per 28 tons 4,550 Lbs.
Total clinker per ton
Total clinker per ton
Total tin cans from 28 tons900 Lbs.



Los Angeles County, California; San Fernando Road. Surfacing with asphaltic concrete; December, 1922.

Don't Scrap Old Worn-Out Roads— Surface—Save Thousands of Dollars

Why spend thousands of dollars tearing up worn-out streets and highways and building new ones, when they can be saved?

Old pavements are worth from \$6,000 to \$10,000 per mile—the saving that can be effected, over the cost of new construction—when they are surfaced with asphaltic concrete.

Asphaltic concrete cannot be equalled for this work. It is adhesive and its waterproof and shock-absorbing qualities protect the old roadbed. It is durable, its first cost is reasonable, and its maintenance cost little or nothing.

Save the old pavements—surface them with asphaltic concrete.

STANDARD OIL COMPANY
(California)

ASPHALTIC CONCRETE

for durability

CALOL ASPHALT for BEST RESULTS

(Continued from page 410)

the traffic in that particular area, or merely one that will ship its goods directly by water or rail, which latter fact would have absolutely nothing to do with the necessity for developing street areas or main arteries for traffic. which would have some connection with the city itself. In that respect, time and time again we are confronted with this question: Shall we zone a particular area for the purpose of industry use, when the street system is not adequate, when they are going to demand a very considerable amount of traffic area, when they are going to demand a very large amount of street car service, and also a very considerable amount of trackage facilities, and that sort of thing. Can we zone a particular area for this purpose, or shall we leave it in a business or residential zone, or whatever the case may be, because we haven't the facilities there?

That point, it seems to me, is quite important, and it argues that when a question of zoning is considered, it must be considered not only from the point of view of the character of the use, but the extent to which a particular piece of property shall be used, and make classification between large and small factories, between the character of the product they are going to produce, and

how it is going to be handled, so that we properly zone a certain section for industry, including a careful consideration of the street system.

So we have, in addition to the quantitative and qualitative use problem, if you want to use those terms, one other phase of zoning of which Judge Stephens seemed to be a little afraid, and I don't blame him, namely, city planning for esthetic purposes. The city planner is all the time thinking that estheticism might be called an advantage to the city. No city has ever shown its ugly side. They are always taking pictures and some of them even faking them, and they usually send them out in pamphlet form, realizing that in that way they may attract the newcomer. Personally I believe it is a very definite asset, and that the city planners will eventually convince our communities that esthetics must be considered as part of the general subject of zoning. But we must go slowly, as we have been going slowly right along in regard to city planning work, and whenever the time is ripe, see to it that the matter is so presented that the people will not object very strenuously to the estheticism involved in the plan, and will know that it is to the city's advantage.

I had a personal experience recently where, in front of my house, I had a



GLADDING, McBEAN & CO

USE PERMANENT PIPE FOR IRRIGATION DRAINAGE CULVERTS SEWERAGE

CROCKER BLDG. - SAN FRANCISCO WORKS-LINCOLN,CAL.

view of about seven counties. Someone decided to build a building that looks a little bit like the rear end of a certain animal that Mr. Bryan objects to as being our progenitors. That building, if it had been placed six feet off the line upon which it is at the present time, would have left the view, and incidentally not given me the discomfort or the pain or whatever it may be called, of looking at it as I have to almost constantly. That sort of zoning perhaps pertains to the height of buildings, perhaps pertains to the location of the buildings upon particular areas, or whatever it may be. But I believe the time is coming when we will recognize that, when you are buying property on a hill, you are not buying merely the privilege of straining your heart morning, noon and night, but also for the purpose of looking at the view, when you have the time. And if somebody else is pigheaded enough or selfish enough to put a building in front of you and shut

off your view, merely leaving you the privilege of climbing the hill, he is infringing quite as much upon your rights as if he had a chicken yard or a factory or something else of that kind next to you. I believe we are going to accomplish that, which is quite an important thing.

I thought I would speak very briefly this morning, because I would like to bring out in discussion some of the points that might come into your minds, and say, in a sort of brief way. that we can't zone intelligently and adequately and efficiently without realizing that the street system must serve people in an adequate way in the district you are providing; that if you are developing a business district, you must recognize that it is not enough to say, "Here is a business district," but you must realize the fact that when you have a business district, people must be able to park there and must be able to

(Continued on page 438)

LAFRANCE PEERLESS FOLDING LADDER

Wins Great Favor in Fire Departments

The LaFrance Peerless Folding Ladder is a unique and valuable piece of fire fighting equipment. When folded it requires no more room than a pikepole. It can be carried by one man. Very useful as a battering ram. One man can instantly open it into a ladder 11 inches wide.

Made of timber selected for its great strength and resistance to climatic changes, combined with lightness and ease of handling.

> 9-ft. ladder, weight, 16 lbs. 11-ft. ladder, weight, 19 lbs.

WRITE TO-DAY FOR SPECIAL ILLUSTRATED CIRCULAR

AMERICAN-JAFRANCE FIRE ENGINE COMPANY, INC.

151 New Montgomery St. San Francisco, Cal. 1302 Washington Bldg. Los Angeles, Cal.

Revised 1923 Street Improvement Forms

We have just completed a most thorough revision of all our legal forms in connection with street improvements to include the changes caused by recent amendments.

Street improvement is now being performed in the majority of our Cities and Towns, and the intricacies caused by our ever changing laws only increases the possibilities of serious legal errors. Our forms have been revised and rechecked by Attorneys and Street Experts, who are well versed in matters of this kind, and therefore, are as near perfect as possible to make them.

The forms are very complete, all legal wording being in full, leaving spaces that the various Cities must fill in, such as dates, descriptions and numbers.

We have put these forms in sets, which are sufficient to complete one street proceeding, or they can be ordered in quantities of various forms.

Why take the risk of errors by making your own forms, when ours will save both time and trouble.

Order one set of forms to-day, and be prepared against emergency.



A. CARLISLE & CO.

Specializing in Street Forms for Municipalities

(Continued from page 436) go through there, without cutting off the sides of the street cars as we to-day in Berkeley are doing, figuratively speaking, and that it must be safe so that people will be perfectly willing to go there. Incidentally you want to be sure that not only will people be safe, from the point of view of life and limb and property, and also leaving their automobiles lying alongside. We don't want to be afforded the privilege of shopping in any particular district, and at the same time be given the privilege of paying a fine to do it. And that is happening, just because we haven't had the foresight that the traffic area that you have is not adequate to take care of the people who go there. Also, if you are developing an industrial district, you want to be sure that you have enough street area to carry the traffic which serves particularly that industrial area. It seems to me that is quite important in the development of practically every system of zoning.

So I may say, Mr. Chairman, that I believe I have brought out just one or two points, and I hope the cities that are talking about zoning, and many are, and who are convinced that zoning is insurance, and it is a life job, such as Mr. Stephens believes everyone should have. And to convince a city that they need zoning takes more time and patience than to actually do the zoning job.

In conclusion, I want to say that no zoning is adequate without a main thoroughfare system, and no main thoroughfare system can be laid out without a very thorough survey of all the problems of traffic in your city. When you have that you have an intelligent zoning scheme. And remember that they are perfectly interdependent—you can't zone without taking care of traffic, and you can't take care of traffic without zoning.

Thank you. (Applause.)



PARAGON Fire Hose

"Anything less than the best in fire hose is a losing investment."

United States Rubber Co.

EUREKA FIRE HOSE DEPARTMENT 1104 I. N. VAN NUYS BLDG. LOS ANGELES, CAL.

> 812 SEABOARD BLDG. SEATTLE, WASH.



GRIFFITH COMPANY

Owners of
FAIRCHILD-GILMORE
WILTON CO.

Paving Contractors

Rooms 500-504

Los Angeles Railway Building

Los Angeles

EDWARD GLASS

UNDERWOOD BLDG. SAN FRANCISCO

(Continued from page 430)

nearly that, of maps of our preliminary report. This committee, acting for the city council, went through the same requirements as would the city planning board, and the city council, under the law, and at our hearings were distributed plans of the tentative report, and finally of the final report with very few complaints. The matter was published in the newspapers, and maps were published there, and there was considerable publicity given.

I would like to ask Mr. Mason a question as to set-back lines in San Francisco. Have you undertaken to establish a set-back line that would not conform to the existing property, the existing buildings? If one was nearer the front and another one back, would you establish the set-back lines some distance from the sidewalk. Which one of the buildings project further front and require new buildings to form a new line? Have you gone into that question?

Secretary Mason: I think in one or two cases we have done that, but only to a very limited extent. It would be perfectly proper to do that in certain cases, to show that, should those buildings be burned or removed, a set-back line would have to be re-established, according to the new lines. I think we have done that in one or two cases, and we have established a set-back line in the rear of some frontages in the row.

Mr. Sanderson of Berkeley: I understood from your statement, Mr. Mason, that you would allow the corner lot less set-back than the inner lot?

Secretary Mason: Yes, that was the idea.

Mr. Sanderson: In other words, do you allow the corner lot owner to build out to the lot line, and thus obstruct the traffic? As I understand the setback line, the main idea is to serve as a widening of the street, and at the same time to protect the traffic.

Secretary Mason: You will understand that in San Francisco, most of our lots are extremely narrow, only 25 feet. If we were to take off a few feet of a building on a corner lot, fronting the long way of the building, you would practically prohibit any kind of a structure going there at all. So that if the building fronted on the long face of the corner lot, they might not require any set-back line, and then if we wanted to establish a line for the block, we would start the line, say five feet back to the key-lot building, five feet more to the next one, and then the third one would be 15 feet back. Of course, that would result in three buildings on either end of a row being more or less out of the established line. The line would be started back the same way at the other end. You haven't there conformed to one of the theories of our set-back lines-

N. CLARK & SONS

INCORPORATED 1889

Manufacturers of

ARCHITECTURAL TERRA COTTA, PRESSED BRICK VITRIFIED AND TERRA COTTA PIPE

HOLLOW TILE FIRE PROOFING

FIRE BRICK TILE AND KINDRED CLAY PRODUCTS

Office: 112-116 Natoma St. WEST ALAMEDA SAN FRANCISCO

you haven't increased your angle of vision at the street intersection and assisted the solution of the traffic problem. But you have improved the aesthetics of the block. That has been the principal change made in such case.

City Manager Orbison of South Pasadena: I would like to ask Mr. Mason a question. In our building in South Pasadena, in order to straighten corner lots in an equitable manner, we determined that the set-back on the long side of the lot should be one-fifth of the other frontage. Take, for instance, a corner lot is 50 feet by 150 feet, say, and you had a set-back line upon your short side of 35 feet. You would be permitted to build within one-fifth of 50 feet, or 10 feet, on the long side. In the case of the key lot, however, there is a very undesirable situation, and would it be possible to incorporate in your set-back ordinance that, in your key lot, where your side line was less than the general set-back of that lot, that you would divide the set-back distance between the corner property and the next lot to the key-in other words, suppose

that on a street you had a 30-foot setback and the corner lot could be built to within five feet of the side lines. Divide the difference between 5 and 30, and 17½ feet would be the set-back distance for the building on your key lot. Would it not be practicable to incorporate that in your ordinance?

Secretary Mason: We do not legislate that way at all in San Francisco. Each block is a separate problem, worked out according to the improvement, and we work it out according to the map, and establish it in accordance with the map which is of record in a public office. We don't make any rule for establishing set-back lines, but we take each one and treat it separately. We pass our legislation in accordance with the map which the city planning commission has filed and have our hearing. If there is no objection, the line is established, and you refer to the map for further particulars,

Mr. Orbison: Is that a privilege granted you through your charter?

Mr. Mason: No. There is a State law supplemented by an ordinance.

Sacramento Capital National Bank Bldg. San Jose Bank of Italy Bldg. Los Angeles Fay Building

WILLIAM DOLGE & CO.

Certified Public Accountants Municipal Accounting

Audits, Examinations and Special Examinations. Accounting Procedures for Municipal Utilities. Budget Systems Installed

Telephone Sutter 697

369 Pine Street

San Francisco, Cal.



The Skid-Proof Road

-is Concrete.

Its even, firm, gritty surface prevents slipping even in wet weather.

It is the necessary complement to good tires and good brakes, for complete responsiveness in your car.

More and more motorists are insisting on Concrete roads—and motorists can get the kind of roads they insist on.

> Send for our free booklet R-3, Facts about Concrete Roads

PORTLAND CEMENT ASSOCIATION

785 Market Street 548 South Spring Street
SAN FRANCISCO, CALIF. LOS ANGELES, CALIF.

A National Organization to Improve and Extend the Uses of Concrete

Offices in 22 Other Cities



"Lucky" Baldwin's Old Home Town

These views of First Street in the little but busy town of Arcadia, California, show two extreme sections of a road so very smooth, so perfect, that one who rides thereon may wonder.

Connecting the heavily-travelled Foothill Boulevard, which leads to San Bernardino, with the equally trafficked Huntington Drive, this further example of the efficacy of GILMORE ASPHALTIC ROAD OIL BINDERS shows no signs of wear.

The performance of GILMORE ROAD OILS years after they were applied leaves an impression of absolute consistency in service.

Their durability guarantees them against complaint.

GILMORE OIL COMPANY

700 I. N. VAN NUYS BLDG. LOS ANGELES, CALIFORNIA (Continued from page 418)

No court ought to make up its mind in chambers before it goes out on the bench. He may, but he keeps it to himself if he does, if he is wise. I have had members of our council come to me and say, "I wish I knew how to decide this question," and I have replied, "Wait until we get our testimony in. If we are not ready we will postpone it. But let's hear the testimony." If you have made up your mind before you go out, the people are some time going to discover it. I used to go before boards all over the state. bidding on bonds, a good many years ago. One Council or Board of Supervisors went behind closed doors for three hours, and I began to get suspicious. They were telegraphing to other places to see whether people who had made a little lower bid than mine would change the wording of their bid to conform to proposals. Of course, I was not very much pleased with that. The people are not going to be pleased in your city if you are going to make up your mind and decide the case before you go out into the council room and hear the evidence.

Another thing: Don't make exceptions to meet hard situations. Remember the lawyer's maxim that hard cases make bad law. Decide your zoning questions according to zoning principles

FOR SALE -

The entire equipment, consisting of Gas Engine, Compressor, Gas Holder, Pipe Line, Meters and Connections, Governors and other equipment pertaining to a small natural gas plant. Would prefer to sell as a whole.

ROCHESTER OIL COMPANY

SUISUN CITY, SOLANO COUNTY, CALIF.



BEAUTIFUL LAWNS

Easily and Economically Kept Beautiful with our Modern
Mowing Machinery

MOWERS FOR HAND-HORSE-POWER OR TRACTOR USE

H. V. CARTER MOTOR CO.

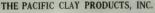
52 Beale Street

San Francisco

WE SOLICIT MUNICIPAL ORDERS FOR



VITRIFIED CLAY SEWER PIPE AND FERGUSON SEGMENT SEWER BLOCKS



600 AMERICAN BANK BLDG.

LOS ANGELES, CALIFORNIA

BURNS & McDONNELL

Engineering Company
CONSULTING ENGINEERS

Water Supply, Waterworks, Sewerage and Sewage Disposal, Power Plants, Gas Plants,
Valuations and Rate Investigations of Municipal Utilities

LOS ANGELES, CALIF. Marsh-Strong Bldg. KANSAS CITY, MO. Interstate Bldg.

so far as you can. Of course, some exceptions have to be made, on account of the haphazard condition your city is already in, for want of zoning. I take it, if your city is not zoned at the present time, that it is due to the fact that you are not ready to incur the expense, for, after all, there is no cheap way of zoning, and you have got to have a survey made of your city, so it can be brought before the council, if you are going to make an intelligent general ordinance; or it may be due to the fact that you have no leading citizen who is both qualified and willing to undertake to educate the people up to the point of demanding a zoning law. But I will say this, that if you are not zoned, I believe and am thoroughly convinced that the sooner you are zoned, the better it will be for your community, and I know that it will be proportionately far less expensive if you do it as early as possible.

When valuable improvements are put

up, you cannot widen your streets, and you have to make tremendous outlays of capital, such as London did for Kings Way, such as New York and Chicago have done on their traffic ways, expending from three to twenty million dollars in order to widen a thoroughfare.

My time is up. I see both lights are on-I did not know it, Mr. Chairman. (Applause.)

President Merritt: I am sure that we have been very much interested in Mayor Stringham's address, and we hope to hear more from him when the discussion comes along. But we shall have to keep to the 20-minute rule and as I don't want to hurt anybody's feelings, I give you fair warning to look for the red light. Our next subject is "The Development of Regional Planning and Subdivision Control," which will be discussed by Mr. G. Gordon Whitnall, City Planning Director, of Los Angeles. (Applause.)

Supervisor Smith and the Armco Culverts He Installed 16 Years Ago



Prescott, Arizona, June 6, 1923 I was Supervisor of Yavapai County from 1905 until 1912 when Arizona became a state. During my term our Board bought many hundreds of feet of Armco Iron culverts from your representative, Ben Welch. Today I went out and inspected some of these culverts which I bought and helped put in in 1908. I also inspected a 12" Armco Iron culvert in front of my home in Prescott which has been

there since about 1907. As far as can be seen these pipes are as good low after 16 years in the ground as the day hey went in.

they went in.

The soil in this county is very mineralised, and metal doesn't ordinarily last very long when

Yours very truly.

BARNEY SMITH.

CALIFORNIA CORRUGATED CULVERT COMPANY

409 LeRoy St. Los Angeles

5th and Parker Sts. W. Berkeley

(Continued from page 421)

to the south, and gradually or rapidly they begin to scatter promiscuously, before you know it a valuable territory is all covered with the "snow fall" of subdivisions.

How important it becomes to exercise the character of control over subdivisions. to assure a community first, that a particular subdivision shall contribute its little share to the creation of the metropolis, which, when created, will not have to be re-made at the cost of hundreds of millions of dollars, such as is the case with the \$360,000.00 program now involved in the city of Chicago: and secondly, so that it shall assure to the subdivider the greatest amount of return that comes only through the knowledge that his subdivision has taken advantage of the fore knowledge of everything that is going to be of significance to that subdivision.

To adequately discuss in detail the procedure necessary to exercise control. would be to launch upon a subject so intricate, and I judge so little understood through light of experience, as to require more time than is now permitted. May I, however, suggest that in view of the exceeding importance of this subject, that there is probably none that will so warrant study upon the part of the League of California Municipalities. We must secure for the communities increasing power in regulating this all important subject of subdivision control. Why should we content ourselves to endeavoring to undo the mistakes of vesterday. While we are doing that the same thing is recurring ten times over right around us. How much better it would be that we extend our observation to the saving of that which is now in a creative state, and then when that shall have been assured, come into the center and do such re-

PIPE TANKS CULVERTS

For PERMANENCY use STEEL For OUALITY buy "WESTERN"

We furnish Pipe from 1-16" to 1" thick in any diameter.
WESTERN makes STEEL TANKS for all purposes.
Designed, Fabricated, Erected anywhere on the Pacific Coast.

WESTERN CORRUGATED CULVERTS will give service heretofore unknown, as WESTERN CULVERT METAL is of unequaled rust-resisting, non-corrosive Quality. You will find nothing but "WESTERN" Culverts under the State Highways.

Let Us Figure Your Specifications

Western Pipe & Steel Co. of Cal.

444 Market Street SAN FRANCISCO

1758 N. Broadway
LOS ANGELES

TAFT

BAKERSFIELD

FRESNO

modeling as may be required in the case. That is the message I have to offer this morning to the members of the League. I make no definite recommenda-

tions. I haven't the means or the knowledge to do that. That can come only from combining all the best thought of our city officials throughout the Pacific Coast, as a matter of fact, throughout the country. And yet it can be said, with the utmost credit to this League that such little regulation as we are to-day able to employ in connection with subdivision emanates directly from an act of this League of California Municipalities in 1915, when it succeeded in having passed through the Legislature the act under which we are now working. May we in the future direct our attention more to this

all important subject of creating in our several metropolitan districts a mosaic that, for proportion, for efficiency, for economy, may be pointed to by those who are yet to come, with the statement that those who have gone before them, meaning us in the convention at Coronado, began the work that left its indelible mark upon the communities of the Pacific Coast. And then, indeed, we shall have entered upon and accomplished a thing that will be a real contribution to humanity itself, (Applause:)

President Merritt: Our next speaker, Mr. John W. Mitchell, President of the Municipal Art Commission of Los Angeles, will discuss the subject "Acknowledging Art as an Objective of City Planning." I present to you Mr. Mitchell.









TRIDENT METERS FOR ALL SERVICES

Split Case Meters for Warm Climates C. I. Breakable Frost Bottoms for Cold Climates Hot Water and Oil Meters. Crest Meters for Large Flows Compound Meters for all streams. Large and Small

TRIDENT DISC

Sold 158,000 in 1921

A record unsurpassed in the history of the Meter Business

MANUFACTURED BY

NEPTUNE METER CO.

NEW YORK

CIPIC COAST BRANCHES AT PORTLAND, SEATTLE, SPOKANE, SAN DIEGO

LOS ANGELES OFFICE AND WAREHOUSE 701 East Third Street



TRIDENT CREST SAN FRANCISCO OFFICE

REVIEW OF THE LATEST BOOKS AND ARTICLES ON CITY PLANNING

Conducted by MARY T. HEDGES

Of the State Commission on Immigration and Housing.

Note—This department offers its services to cities and individuals wishing to secure reference material on any of the various phases of city planning. Inquiries may be addressed to the office of the commission or the league.

Manual of Information on City Planning and Zoning By THEODORA KIMBALL* Harvard University Press, Cambridge

"Investment in a good plan whether it be for new parts of a city or for the correction of older parts, if regarded for the period of a year, may appear expensive; if considered for a period of five years it will be an investment which in subsequent days will make the community regret that it did not adopt it sooner."

John Burns, "The Father of British town planning."

That American cities believe city planning is sufficiently profitable to be a desirable investment is evident from a study of the list of appropriations (Page 51 of the Manual) compiled by Flavel Shurtleff, Secretary, National City Planning Conference, which gives the amounts appropriated by 53 cities for the work of their city planning commissions from 1920 to 1923. Although this list by no means includes all of the cities in this country making appropriations for planning and zoning traffords data for interesting study.

The 53 cities are classified by population and a summary of the figures shows that in the past four years the following amounts have been appropriated:

Eleven cities of 300,000 and over: Have a total of \$862,501.89 for the four years, with an increase for 1923 of \$46,214.24 over the 1920 appropriations

Twelve cities of from 100,000 to 300,000: Have total appropriations for the four years of \$358,970.00 with an increase in the amounts for 1923 of \$13,842.00 over those of 1920.

*Miss Kimball is Librarian of the School of Landscape Architecture, Harvard University, Honorary Librarian of the American City Planning Institute, and Associate, British Town Planning Institute. Thirty cities of less than 100,000: Have total appropriations for the four years of \$197,438.36 with an increase in the appropriations for 1923 of \$24,613.03 over those of 1920.

It is noteworthy that every city in Indiana has a minimum appropriation of three mills on the dollar of assessed valuation if it has a city planning commission.

In the first chapter "City Planning Facts," Miss Kimball presents a concise review of the entire subject, discussing the wisdom of careful legislation, appointment and personnel of the planning commission, the necessity of securing expert advice for any city planning program, the relation of the survey to the plan, financing the plan, and the present status of city planning. Concerning the last topic she writes:

"Statistics to date are not available as to city planning legislation in all States of the Union, but this information is now being assembled at the office of the Division of Building and Housing of the (United States) Department of Commerce. In Massachusetts, where there is a compulsory city p anning law, 53 planning boards are already in operation. The Secretary of the Massachusetts State Division of Housing and

Town Planning has compiled information showing that 20 states have statewide laws authorizing cities to appoint planning commissions. Twenty-five states and the District of Columbia have enabling legislation for zoning and 109 cities, towns and villages were zoned to January 1, 1923, as compared with 55 just one year before.† More than fifteen million people live in the zoned cities, towns and villages, or 27% of the urban population of the country."

The Manual lists typical plan reports of American cities, and references to the published reports of other cities in the United States may be found in the bibliography. State and national organizations devoted to the furtherance of city planning and zoning are listed, with their addresses, which last item will be particularly appreciated by cities and towns desiring information and assistance. There is a condensed report of town planning in other countries-Great Britain, France, Belgium and Germany, together with selected references on town planning in many parts of the wor'd.

The bibliography, covering the whole field of city planning and containing more than 2,000 references is so an-

notated and classified that it is a simple matter to find what has been written or done in any special phase of planning or zoning, as for example, set-back regulations, regional planning, height limits, street widening, open spaces, condemnation or legislation.

Additional features of the Manual are the list of Ten References for the Shelf of a City Planning Commission, Twentyfive References for a City Planning Library, and the List of American Periodicals devoting space to City Planning and Zoning.

The Manual of Information is in every respect a material contribution to the field of city planning and is particularly valuable to city officials interested in bringing the experiences of other cities to bear upon the planning problems of their own communities.

† Note—In connection with the foregoing it is interesting to learn that since these statistics were prepared, 39 cities have been added to the zoned cities, making the total 168 instead of 109. Seven States have passed enabling acts during 1923, making the total 32, and two States have adopted amendments to their existing acts to make them conform more closely to the standard zoning cauching act. Zoning Notes by Frank Backus Williams, American City, July to October, 1923.)

The Growth of the New York Regional Plan-Supported by the Russell Sage Foundation, is being watched with interest by cities throughout the United States. Not only city planning authorities, but engineers, financial experts, lawyers, and other technical and professional men are participating in its development. Among the preliminary surveys undertaken have been housing, industries, recreation centers, problems presented by the inclusion of adjoining cities, legislation and waterways. A number of these surveys have been completed and the actual work of planning will be commenced in October under the direction of Thomas Adams, who has as his associates in this work six of the best city planners in the United States, together with a large corps of assistants.

Proposals for Zoning of Street Lighting— Charles J. Stahl, American City, October, 1923.

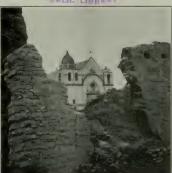
Mr. Stahl argues that "Street-lighting improvements should be carried out under comprehensive programs co-ordinated with city zoning plans." He explains the causes for the inefficiency of many present systems and suggests a set of rules as a guide to correct procedure in the installation of street-lighting systems.

Pacific <u>Municipalities</u>

A Monthly Review of Municipal Problems and Civic Improvements

OFFICIAL ORGAN OF THE LEAGUE OF CALIFORNIA MUNICIPALITIES

WELIG LIBITATI



CARMEL MISSION-Erected in 1771

LEADING ARTICLE IN THIS ISSUE

Proceedings of the Twenty-fifth Annual Convention of the League of California Municipalities at Coronado, California (Continued)

Publication Office 707 Chancery Building, San Francisco, Cal. Two Dollars a Year Single Copy 25 Cents

THE F. L. DECARIE NON-STOKING OSCILLATING-GRATE GARBAGE INCINERATOR

recently installed for the City of Spokane, Wash.



We also installed this type of Incinerator for the City of Outremont. The result of test and report of the City Engineer and Manager are contained in this issue.

The City of Sacramento, Cal., has adopted this OSC!LLATING-GRATE, NON-STOKING type of Incinerator and now has under construction a plant of one hundred and fifty tons capacity.

This OSCILLATING-GRATE type has no connection with and is a complete departure from the water tacket type.

THE PACIFIC BRIDGE CO.

PACIFIC COAST REPRESENTATIVES

Address all communications to P. O. BOX 1214 Sacramento, Calif.

Pacific Municipalities

AND COUNTIES

OFFICIAL ORGAN OF THE LEAGUE OF CALIFORNIA MUNICIPALITIES
Entered as second-class matter March 22, 1913, at the Post Office at San Francisco, California, under
the Act of March 3, 1879.

TWENTY-SIXTH YEAR

No. 12

VOL. XXXVII

	FI. A. WASON and WM. J. LOCKE			
Editorial and Business Office	Fifth Floor, Pacific Building, San Francisco			
Advertising	RATES ON APPLICATION			
Address all Communications to "PAC	CIFIC MUNICIPALITIES." Pacific Building			
	ancisco, California			
DECE	EMBER, 1923			
NOTICE—Every city belonging to the of this magazine for each of its officials Secretary.	League of California Municipalities is entitled to a copy without extra charge. If not received kindly notify the			
A. Carlisle & C	Co., Printers, San Francisco			
C	ONTENTS			
C	PAGE			
CARMEL BY THE SEA. By A	. C. Jochmus			
	LAW FOR THE RECALL OF PUBLIC			
	French, City Attorney of East San Diego. 453			
	N DAM WILL DO FOR CALIFORNIA.			
	iber of Congress			
	TAN PLANNING PRINCIPLES. By			
	463			
	OWER SYSTEM. By S. C. Evans,			
	465			
	SANTA ANA			
	WAR 467			
	467			
	DECARIE INCINERATOR 469			
	LE. By Wm. J. Locke 470			
	IN LOCAL POLITICS 470			
THE MENACE OF THE WOODE	EN SHINGLE 473			
THE NEXT CONVENTION	476			

TWENTY-TWO MILLION PEOPLE LIVE IN ZONE CITIES.....

INDEX TO VOLUME 37.....

LEAGUE OF CALIFORNIA MUNICIPALITIES

Organized 1897
Affiliated with the Bureau of Municipal Reference, University of California

OFFICERS

President, CHARLES N. KHEKBRIDE, of San Mateo
Vice-President, NORMAN E. MALUSHA, City Attorney of Palo Alto
Secretary-Treasurer, H. A. MASON, Bond and Ordinance Expert of the City of San Francisco
Executive Secretary, Why. J. LOCKE
Headquarters, 707 Chancery Building, San Francisco
Official Printers; A. Carliale & Co., San Francisco

INFORMATION BUREAU

The League of California Municipalities maintains in connection with the Secretary's Office, a Bureau for fornishing rity and town officials with information on municipal affairs, and leaning copies of new ordinances and specifications. Officials are urged to make a free use of this Bureau. Kindly send a self-addressed stamped envicepe in all cases.

Members of the California League of Municipalities

Alameda	Covina	Isleton	Untario	San Mateo
Albany	Corte Madera	Jackson	Orange	San Rafael
Alhambra	Crescent City	Kennett	Orland	Santa Ana
Alturas	Culver City	King City	Oroville	Santa Barbara
Amador City	Daly City	Kingsburg	Oxnard	Santa Clara
Anaheim	Davis	Lakeport	Pacific Grove	
Angels		Larkspur	Palo Alto	Santa Cruz
	Delano			Santa Maria
Antioch	Dinuba	La Mesa	Pasadena	Santa Monica
Arcadia	Dixon	La Verne	Paso Robles	Santa Paula
Arcata	Dorris	Lemoore	Patterson	Santa Rosa
Arroyo Grande	Dunsmuir	Lindsay	Petaluma	Sausalito
Auburn	East San Diego	Livingston	Pledmont	Sawtelle
Avalon	El Cajon	Livermore	Pinole	
Azusa	El Cerrito	Lodi	Pittsburg	Sebastopol
Bakersfield	Elsinore	Lompoc	Placerville	Selma
Banning	El Segundo	Long Beach	Pleasanton	Sierra Madre
Beaumont	Emeryville	Los Angeles	Plymouth	Sisson
Belvedere	Etna	Los Banos	Point Arena	Soledad
Benicia	Eureka	Los Gatos	Pomona	Sonoma .
	Exeter	Loyalton	Porterville	Sonora
Berkeley				South Pasadena
Beverly Hills	Fairfield	Lynnwood	Potter Valley	South San Francisco
Biggs	Ferndale	Madera	Red Bluff	St. Helena
Bishop	Fillmore	Manhattan Beach		Stockton
Blythe	Fort Bragg	Manteca	Redlands	Suisun
Brawley	Fort Jones	Maricopa	Redondo Beach	Sutter Creek
Brea	Fortuna	Martinez	Redwood City	
Burbank	Fowler	Marysville	Reedley	Sunnyvale
Burlingame	Fresno	Mayfield	Rialto	Susanville
Calexico	Fullerton	Merced	Richmond	Taft
Calipatria	Gilroy	Mill Valley	Rio Vista	Tehachapi
Calistoga	Glendale	Modesto	Riverside	Tracy
Carmel-by-the-Sea		Monrovia *	Roseville	Tulare
Chico	Gridley	Montague	Ross	Turlock
				Ukiah
Chino	Gustine	Montebello	Sacramento	Upland
Chowchilla	Hanford	Monterey	Salinas	Vacaville
Chula Vista	Hayward	Monterey Park	Sanger	Valleio
Claremont	Healdsburg	Morgan Hill	San Anselmo	Ventura
Clovis	Hemet	Mountain View	San Bernardino	Ventura
Coalinga	Hercules	Napa	San Bruno	Visalia
Colfax	Hermosa Beach	National City	San Diego	
Colton	Hollister	Needles	San Fernando	Walnut Creek
Colusa	Holtville	Nevada City	San Francisco	Watsonville
Concord	Honolulu	Newman	San Gabriel	Wheatland Watts
Corcoran	Huntington Beach		San Juan .	Whittier
Corning	Huntington Park	Oakdale	San Jose	Willits Willows
Coronado	Hyde Park	Oakland	San Leandro	Winters Woodland
		Oceanside	San Luis Obispo	
Compton	Imperial	Otai	San Marino	Total 244
Corons	Inglewood	Ojai	oan marino	10tal 211

Associate Members-Oregon: Astoria, La Grande

THE STATES

Pacific Municipalities

AND COUNTIES

OFFICIAL ORGAN OF THE LEAGUE OF CALIFORNIA MUNICIPALITIES

Entered as second-class matter March 22, 1913, at the Post Office at San Francisco, California,
under the act of March 3, 1879.

CARMEL BY THE SEA

By A. C. JOCHMUS Secretary Monterey Peninsula, Inc.

A picturesque town in a pine forest, on the Monterey Peninsula, facing the Pacific Ocean, edged by a mile of white sand beach, overlooking the Carmel Mission and the fertile Carmel Valley, four miles from Monterey, five miles from Pacific Grove or Hotel Del Monte, accessible by automobile over a well-paved highway.

How Carmel was named: When Sebastian Viscano, the early Spanish navigator, was skirting the California coast looking for a harbor in which to plant a Spanish colony as a haven to which the Philippine galleons could run for shelter from pirates, he landed in Monterey Bay in December, 1602. With him were three Carmelite friars.

Viscano immediately began to make rough surveys of the territory in order to furnish a map of the harbor with his report to his King. The Carmelite friars took advantage of the delay to ascend the hill back of the landing place in order to examine the country in the interior. When they reached the top of the hill they were amazed by the similarity of the topography of the country to that surrounding the sacred Carmel Monastery from whence they came. The hills and plain of the Bay of Acre on the coast of the Mediterranean Sea, the Plain of Esdraelon and the Hills of Galilee and Mount Carmel in the Holy Land had been duplicated in this far western country. Because of this resemblance, they prevailed on Viscano to name the river traversing the plain, Carmelo River and the mountain in the background, Mount Carmel. He called his landing place Monterey, after the Count de Monterey (see November issue), who was then viceroy of New Spain (Mexico).

The Carnegie Institute at Washington has a laboratory with an experimental station here, where plant life from various parts of the world is grown and studied. Amusements: The stretch of pure white silicon sand with the fifty-two acres of sand dunes, is a famous playground for the children and resting place for the nerve weary. The four hundred acre pine forest, with its three inch deep carpet of pine needles, furnishes all the balsamic odors of the Sierras. Fishing abounds, in the river for trout and steelhead, and in the bay for all kinds of fish and sea food. Walks and drives, walk to Carmel Mission, where the body of Father Junipero Serra and three of his associates and several Mexican Governors are buried. Walk over a portion of the boulevard into the pine forest, to the north of the town, to the old Padres' rock quarry in "Timid Lovers' Glen." Walk to the mouth of the river and gather mussels from Abalone Point. Take stage or drive to Carmel Highlands, walk or drive to Point Lobos. Walk or drive to

Yankee Point, with its Giant's Bathtub, Smugglers' Cave, Peninsula Tunnel, and Meteor Hole.

Carmel Highlands: One of the most beautiful spots in this world—probably the most beautiful—mountain, forest and sea blended in wonderful combination of scenic grandeur. Rugged rocks and booming surf with a background of forest-clad slopes, reaching to the very mountain tops, make the picture complete. And crowning a majestic, craiglike point is Carmel Highlands Inn, 225 feet above the sea.—One must see this beautiful spot—the buildings in perfect harmony with the setting.

"HIGHLANDS INN"

If you love a wild coast, it is here. So is the deep tranquil forest and the rolling uplands, set richly with live oaks and in the spring time exploding into flowers—Gouverneur Morris.

The visitor to Highlands Inn, can well imagine himself on the Coasts of Sicily and The Riviera. Perched on a rock 250 feet above the ocean, and the blue waters, of the Pacific Ocean in front of you and to the right a combination of water and wooded mountains, one cannot find a more restful spot in which to pass a vacation. Far enough from the beaten paths of the auto traffic and yet close enough to offer quick contact with the outside world.

Highlands Inn is five miles down the coast from Carmel with an excellent road passing its door and less than nine miles

from Monterey and Pacific Grove. The main building contains a large lounge and reading room with wide open fireplace at each end. The large windows opening out on to the sea offer a never-tiring picture—one that artists work a lifetime to produce. Those who have enjoyed the sensation of being lulled to sleep with the booming of the surf and the wind sighing through the century old redwoods and cypress trees close by, know what it means to spend a night or two at Highlands Inn.

Points of interest to be seen starting from Highlands Inn are: Redwood Forest and Big Sur: An auto drive of twentyseven miles on the edge of the ocean.

Carmel is less than three miles distant with Carmel Beach, the picturesque artists" colony homes and the famous Carmel Mission, the oldest in the State of California.

The world famous 17-mile drive through the Del Monte Forest and around the rocky coast through Pacific Grove and Monterey is a never to be forgotten trip.

The Polo Grounds at Del Monte where international games are played. Golf is played the year round on the famous Del Monte and Pebble Beach courses. Seven mile drive. Mountain climbing, both river and ocean fishing, bathing and horseback riding are a few of the healthful amusements that are offered to the visitor at Highlands Inn.

ANNOUNCEMENT

On January 1st, 1924, the League headquarters will be moved to more commodious quarters, situated at 707-721 and 722 Chancery Building. The Chancery Building is the new Lawyer's Building of San Francisco, and the League has been fortunate in securing quarters adjacent to the library of the San Francisco Bar Association.

After January 1st address all communications to above address.

PROCEEDINGS (Continued)

of the

Twenty-fifth Annual Convention

LEAGUE OF CALIFORNIA MUNICIPALITIES

at

HOTEL del CORONADO :: CORONADO, CALIF.

Injustice of the Present Law for Recalling Public Officials.

By ARTHUR T. FRENCH, City Attorney of East San Diego.

(An Address delivered before the department of City Attorneys at Coronado, September 12, 1923).

Mr. President, Ladies and Gentlemen: It quite frequently happens that while we may have a general idea of a certain law we do not realize its good or bad features until it has been necessary for us to go into the matters covered by that particular law. This is especially true of the recall as we have it in the state of California

The moment a person accepts public office in this state he places a noose around his neck that may be pulled at any time in any one of several different ways; he may be proceeded against by an accusation by the grand jury under section 758 of the Penal Code, any disgruntled person may cause the removal of the official and at the same time force him to pay the accusor five hundred dollars under section 772 of the Penal Code or he may be removed by means of the recall. When this condition is appreciated it is surprising that there are so

many willing to take a chance by becoming candidates for office.

It is an old saying that "familiarity breeds contempt," and this is probably no better shown than by the attitude of a certain percentage of the people in every city towards their local municipal government. This is doubtless because municipal government comes nearer home to the people than any other branch of our governmental machinery. Then, again, the public officials of our cities are "home folks," and it is a well known fact that the easiest way to incur the enmity of certain people in any neighborhood is to either purchase something those people cannot afford or to attain a position denied to them.

Most of us who have had some experience in dealing with petitions have come to the conclusion that a petition is the easiest thing in the world to produce and the farthest from being the thing contemplated by the various statutes which provide for the circulation of petitions. Signatures can be obtained to any kind of a petition; it is said that a petition was circulated in a certain part of the country at the time when "Tipperary," was being sung by everybody asking that the distance to Tipperary be shortened and that four hundred people signed it. Until this condition is changed our initiative, referendum and recall laws will continue to be the farce they have in the past. This condition makes it possible to force a recall election in at least seventy-five per cent of the cities of the state at any time any man or set of men care to start the circulation of recall petitions.

Probably the greatest injustice in the matter of the recall of public officials is found in the form of the ballot as prescribed by the statute. The statute provides that "there shall be printed on the recall ballot, as to every officer whose recall is to be voted on thereat, the following question: 'Shall (name of person against whom the recall petition is filed) be recalled from the office of (title of the office)' following which question shall be the words, "Yes," and "No" on separate lines, with a blank space at the right of each, in which the voter shall indicate by stamping a cross (X) his vote for or against such recall."

The American people have always been taught to vote "Yes" when they want to favor a person or a proposition and "it is difficult to teach an old dog new tricks." The recall furnishes the only instance in this state where it is necessary to cast a negative vote in order to obtain an affirmative result or vice versa. In this case if you favor the man in office you must vote "No," and it is this condition that works the greatest injustice in the matter of the recall of public officials; it does not give the man in office an even break with the man seeking to replace him. This was demonstrated in a certain city in our

state recently where the five Trustees. on the face of the returns, which have not vet been canvassed, were recalled by majorities ranging from three to fifty-one in a total vote cast of twenty-five hundred. Investigation convinced many of the people in the city that at least one hundred and fifty people voted "Yes" in the election thinking they were voting in favor of the Trustees when in fact they were voting for the recall. When this was discovered many of them were very much disturbed because they then realized they had helped to disgrace those whom they regarded as their friends and whom they believed entitled to the confidence of all those who had the best interests of the city at heart. The effect of this discovery was well shown in the case of an old lady who lived alone in a very humble home in a canon at the end of one of the streets of the city. She regarded all of the Trustees as her friends but in addition to that she felt under obligations to one of them because he had assisted her in a financial way when she needed help. She waited until late in the afternoon hoping some one would come and get her and take her to the polls but no one came so late in the afternoon she started out and walked nearly a mile in order to vote, as she thought, for her friends.

The next Sunday after the election the old lady, who is nearly eighty years old, stopped at the home of the Trustee to whom she felt under special obligations and in the course of the conversation she discovered that by voting "Yes" she had voted against every one of them. When the poor old lady realized what she had done she broke down and wept like a child and she worried about it so much that she took to her bed and was ill for two or three weeks. On the face of the returns this particular Trustee was only recalled by three votes which made it seem all the more terrible to the old lady. This condition existed in that particular

(Continued on page 471)

What the Boulder Canyon Dam Will Do for California

Address by Hon. PHIL D. SWING, Member of Congress from California, before the Twenty-fifth Annual Convention of the League of California Municipalities at Coronado, September 12, 1923.

Mr. President and Ladies and Gentlemen of the League of California Municipalities: I have a difficult subject to present to you today, one that it is extremely hard to find language to aptly and correctly describe, for I am to portray to you just what the Boulder Dam and all it subsidiary development will mean to California when it once has been completed and put into operation. From another point of view, my subject is an exceedingly easy one, because I can shut my eyes and make the wildest kind of statements that it would be possible to make, and I am just as confident as I am that I am standing here today that any statement I may make to you will be absolutely justified in the course of time. As we Californians say regarding the State, so I say regarding this project, that it is absolutely impossible to over-state the importance and wonderful effect the development of this river will have upon California. Indeed, nothing that has happened in the history of California, down to the present, will give the impetus to the material development and prosperity of this state as will the development of the Colorado River.

The history of all times shows that great civilizations have developed their foundations resting upon some great river, the Nile, the Tigris, the Euphrates, the best, the highest civilization of ancient times, all show what the life-giving waters of a river can do for a people and for a civilization. We have all that the Nile has. We have all the Tigris and the Euphrates had to give to their people. You can parallel the fertil-

ity of the soil, the climate, and the general physical surroundings, and you have your parallel. But, in addition to that, we have something that the ancients never dreamed of, and which will carry our civilization far beyond anything that they could possibly have in their time, and that is hydro-electric power.

The Colorado River has not been well known in the past. The course of travel has been at right angles to the river. It has been considered for years and years an obstacle to be overcome, and the question has been asked, as to how a proper bridge could be thrown across it and the bridge be made safe. People traveling from east to west see the river. and say, "There is the Colorado River," and then it is gone. If the formation of the mountains had not been such as to prohibit up and down travel on that river, the country and the river would have been much further developed than it is now. As was said by the President regarding the North and the South, if the great transcontinental railroads had been built north and south instead of east and west, there would have been no civil war. That is the effect which travel has. Hence there has been a delay in the development of the Colorado River, the greatest single asset in the United States today

The people of Imperial Valley, the pioneers of this state, and of all states who went there to develop that country, were confronted from the beginning with the problems of the Colorado River. They were down on the end of the stream. Everything that happened up-stream af-

fected their lives and their prosperity. They got what water was left over after the other communities had gotten what they wanted. And sometimes it was not enough. And then, when they were served up-stream, why, the people passed it on down to the Imperial Valley, and oftentimes they got too much. So it has been from the start at once their hope and their fear, and they have been confronted with the situation of finding a practical solution of the problem of the Colorado River. They have spent their money freely, and have given their best efforts and best thought to working out a proper solution of the question of the Colorado River.

At the present day others, seeing the possibility of the stream, from the propaganda that has been put on first by Imperial Valley, and then by our neighboring communities, partly out of sympathy, the thing has grown, until today the great private power companies announce that they are going to save Imperial Valley, coming in at the eleventh hour, in spite of what anybody else is going to do. So we have people that are going to save us from the river and from our own plans, because the worth of it has become evident to every perosn who studies it.

Yet it is not the Imperial Valley plan We never so viewed it. thought that, because it was an interstate stream, and technically, a navigable stream, the Government of the United States should pay some heed to that river. Our Government guarantees to protect us against violence from external force. Why should it not protect us from violence from internal force? The great Mississippi River has been adopted by the United States as its protege, and \$116,000,000 has been expended by the United States Government in curbing the flood waters of the Mississippi River. Not a dollar of it will ever return to the United

States Government, except in increased happiness to the people who live there, and that is a sufficient return. And with that view point, it will go there and there will be an unending expenditure, because the problem of flood control by levee is an unending problem always. You must be ever watchful, always replacing and building up higher and higher on any stream which is silt-bearing, and both the Mississippi River and the Colorado River are.

But God so created the country up and down the Colorado River that the flood control of the Colorado River can be solved practically once and for all; I say once and for all—for 300 years, as far as you and I are concerned, and after that there are many other sites for other reservoirs which will do the same thing for another 300 years, and finally, having stepped back, putting in these dams, they will eventually put the river in a condition where it will stop carrying the sil , and at last all the reservoirs will be clear, so that they can be used forever.

This is the situation which Imperial Valley has found: It sets like in the bottom of a saucer, and around the rim of the saucer, at least around half of it, runs the Colorado River, looking down into the Imperial Valley. There is a drop of 300 feet in 60 miles from up-stream to the point where the intake takes into the bed of the Imperial Valley, called Salton Sea. From that same point, 60 miles to the Gulf of California, is a drop of about 70 feet. So the forces of nature are at work here, especially gravity, in the course of that river down into the Imperial Valley.

In fact, the floods of the Colorado River created the Imperial Valley. They deposited 600 feet of soil there, a fraction of an inch at a time. So it is that we say the flood waters of the Colorado River created the Imperial Valley. The flood waters of that river may destroy it. As we say about the human body, "From dust thou art; to dust returneth," so it is there. Since it came in water, immediately the water has come again, it dissolves. And that makes the problem of flood protection one of great importance.

The people of Imperial Valley have expended several million dollars for flood protection by levee, and it has been by levee, because that is all they have within reach. Yet the problem, from the fact that the fluctuation of the river up and down is so great, ranging from 5000 second feet in a low time to 150,000 and even 200,000 second feet in a high time. So you can see that the river will be at the top of the levee at one time, and at the bottom at another, and when it is high the silt will be deposited, and it will dry and crack and open up, and the cracks will catch the next high water and you have got to be on the watch and guard, working on all your levees and keeping them from cracking and adding to them, because there is deposited on the south side of these levees every year as much solid material as was taken out of the Panama Canal in the whole ten vears of its construction.

We have to add at the rate of about half a foot a year on that levee. And, as any engineer will tell you, it costs more to add a foot up on top of that levee, because you must get back two feet for every foot on the top to be safe, due to the fact that a dirt dam becomes, from an engineering standpoint unsafe above a certain elevation—it won't withstand the pressure.

We have about arrived at the maximum height of expenditure of money and of safety in the question of the endurance of a dam. Hence it becomes absolutely necessary for us to find a new method of overcoming the problem of Imperial Valley—and when I say "Imperial Valley" I use it only as a symbol of all those great communities along the

river, the great Yuma Valley, the Palo Verde Valley, The Needles-all those communities are identically the same. A river must be throttled down to a certain safe flow. You get into your Ford, or, as to those of you who have better machines than Fords, you get into them, and you go out on the road, and if you get up above 50 miles an hour, your car will develop a swaving motion. That is a signal to slow down a little. It is just the same thing on the Colorado River. When it gets up above 50,000 second feet of water, it develops something that is akin to that swaving motion. and we call it side-sweeping-it goes into the bank near the bottom and takes off a part of the levee, and then it bounds to the other side and takes off a part there, and finally it takes off enough levee that it develops a sort of half circle, and then it is worse than ever, because if the water cuts into the levee in that way, and it goes right through your levee in a few hours, unless you are there to stop it, you have a flood.

There is just one thing certain about the Colorado River, and that is its uncertainty. Take, for instance, one man who got off at Yuma, and he looked at the stream, and he said "This is not a man's job. It is a before-breakfast job," and he took the \$1,000,000 that he had and built a levee, and just as he got back from the work, the river went right through where it was before, the million dollars was spent, and the waters of the river were flowing in identically the same place where they were before he went to stop it, as he thought. No one knows where it is going to strike next. In 1905 and 1906 it struck Imperial Valley. A year and a half ago it struck Palo Verde Valley. Several times it has been actually in the Yuma Valley, but, through working 48 hours without sleep day and night, the men and women there put in sacks and put in a temporary dam, and made a little lake of 1600 acres, and held the river from going into the old valley No one knows where it will strike next. The United States Government, if it had a great ship sinking at sea, would stop every activity it had and send every agency at its command to save 1500 human lives. There are 50,000 people in Imperial Valley alone, and a hundred thousand all together down in these communities, and \$250,000,000 worth of property, and the question is, whether the United States Government is going to wait until a catastrophe is upon those communities and then rush in without regard to price or cost and spend a lot of money that need not be expended if the problem is handled constructively and wisely, and finally simply stop the breaking-in and solve the problem. For \$50,000,000 they can absolutely solve the flood control of that old Colorado River once and for all, and at the end of 30 vears get back every dollar they expended in the dam with interest. Does that sound like a reasonable proposition? Is it reasonable to say that they have not only gotten back their money, but have created an asset that will endure forever. as long as the forces of nature continue to function, they have acted wisely and well? To us it sounds like a reasonable proposition, here in the West, that it should be done. In the East, it sounds entirely differently. They always ask, "Why should our communities be taxed to build up the West, and particularly California?" They seem to think that Californians have an unlimited greed for public money. Uncle Joe Cannon said at one time that, as to making a raid upon Congress, Western Congressmen, although only a handful, have a habit of making a noise like a majority. Well, we have to, in order to get by.

But flood protection is only one phrase of the program here involved. It is a sort of a three-way project, and any one of the three branches ought to command the serious attention of the United States Government. Not only is there flood control projected, but there is the reclamation feature. The United States Government never spent a cent in Imperial Valley, and people were in there paying 12% toward it, while other communities in the country are having such work done for them by the Government. They develop the Imperial Valley at their own cost, and, just as a sample, it is a community which last year put out 14,000 carloads of canteloupes and 8000 carloads of lettuce. I said to a fellow in Brooklyn, in answer to his question, "Why should we tax our people to send the money out to California?" "If you don't, remember that the population of this country is increasing at the rate of a million a year, and the farm hands are going to the cities, and if that continues, you are going to have less to eat, and your tenement districts in New York will have to pay more for it if you don't." There happens to be a little temporary subsidence in the price of agricultural products today. "Oh, yes" they say, "that is permanent. Oh ves, there is over-production in the world today." Here there is a stable medium of exchange, and one of the things that has broken down foreign trade is because you don't know today what the price of the mark, the shilling, the franc, or the lira is going to be tomorrow. I don't care how many francs or marks there are to the dollar, from now on it is going to be the same. It is uncertainty, and everybody believes that human intelligence in Europe will eventually come to the surface and people will find it is more profitable to carry the world on in peace than to carry on war. At least that is our faith. If that does not happen in ten years, we may as well forget this particular phase of it, because there isn't an additional acre that can be put under cultivation until at the end of the ten vears. In addition to that, we are not competing with the Middle West. We don't raise wheat and corn: we grow lettuce and canteloupes and those things which the Middle West does not raise. We can not compete with them. Why. take anything-take grapes or anything else that is shipped out of this section of the country. We only ship those to the market until some other community near the market is ready to ship them. And why? We have 3000 miles to ship as against perhaps 300 on their part. We don't ship lettuce after Georgia starts in. We can't compete with them. We only supply these commodities where there is nothing of the kind raised, and that is a good thing for the public.

So the proposition that there is too much land under cultivation can always be answered, if you can get the man to think hard.

Now, nobody is going to say that progress stops. It reminds me of the time when the weavers took their hammers in their hands to destroy the weaving machines, because they had taken the place of human hands, and they thought that in that way, they were going to stop progress. And today there are dozens of times more of weavers than there ever were before. And take the linotypes. Typesetters were saving they were out of a job. And then what happened? There are more typesetters used today than ever. So progress is going to continue. There will be temporary adjustments, yes. But no one who amounts to anything is going to say that progress must be stopped. Everywhere in our land, we are going to push ahead to the best of our ability.

So here is this great empire, marked upon the early geographies "The Great Colorado River Desert," which is bound to be made a great paradise for those seeking for homes, men who want to get out on the land and live in town. I feel, for one, that those ex-service men who desire to have farms of their own, should be given a preference to enter into the Government land. It is the most statesman-like thing you can do. There are 200,000 applications upon the desk of the secretary today. Here is an opportunity to, not give them money, but to give them an opportunity to make money for themselves and for the benefit of all the people.

Then there is the power, the most wonderful feature of this thing. It is not the most important, because wherever human life and humanity is concerned, that is the most important. But the magic of it all, the wonder of it all, is the hydroelectric power. We stand upon the mere threshold of the possibility of power. We are not vet let into its possibilities. No man can put his hand on and say, "The limit of the possibility of hydroelectric power is there." It is endless. I said to you that, at the end of 30 years. at prices greatly below those existing today, it will be possible to pay back, through the sale of power, the total cost of the Boulder Canyon project. At that, after paving back the capital investment, what is going to be the cost? The labor problem involved is infinitesimal. First there is evaporation, then transportation, and then precipitation. The sun draws the moisture from the ocean, the clouds blow it in from the ocean, and there it is precipitated, and gravity brings it down through turbines, and you have the most workable and most adaptable force, the energy for power, for heat, for light, for all forms of human activities possible.

So I say I see in the development of this river the creation from it of a new Southwest. A great inland agricultural empire. It will be a great inland agricultural empire, creating an almost incalculable amount of raw material from the land. I see that the machines that are today there inactive are not being worked at all, because, while we have the greatest deposits in extent in the world, they are not the richest, and, with hauling the fuel up here and down here, the expense of getting energy in there to produce and transport that, is almost prohibitive. But hydro-electric energy will open the vaults of mother earth and make it available. And there are products of the fields and mills transported over electrically-operated railroads, and give us the opportunity to have the raw materials worked up into finished products.

Why are the great manufacturing plants located in the East? Look at your-self in the mirror, and do you know where your hat, your collars, your underwear, your shoes, your socks come from to California? They are imported in here from some other state. Look around your bedroom, look in your sitting room, your kitchen, your living room. Where are you getting your furniture from, your Victrola? Look out in front, and where are you getting your automobile from? Where, going down to the basement, are you getting your coal from?

Are we less intelligent than they? No. The question which determines location has largely been a basic one for the operation of industry, and that is, primarily, the power, the energy. In the East they have \$3.50 and \$4 coal But let us look at one phase of that. Labor strikes in the production of coal have occurred until we do not know, either in our homes or in industry, whether we are going to have the fuel, or not; and, after we have dug it out of the mines we don't know whether the railroads are going to be able to transport it, or not. It takes a railroad, by the way, one third of the coal they carry for fuel-it burns one-third to carry the other two-thirds. Then you have the congestion in your transportation of this basic element of power, while

here your power comes over a wire, up hill and down hill, and it doesn't cost very much to construct it. There is no strike to be feared, because the labor element is negligible, and there is no congestion, because it goes like greased lightning. And here on the Pacific Coast there is the greatest potential power field in the United States. About 70% of the undeveloped power of the United States is in the Rocky Mountains and on the Pacific Coast. And we are sending it very far. It is not necessary to have it within a short radius. Think of the history of the development of the transmission of electricity, how it has leaped from point to point, starting with probably less than 100 miles. I was told by Mayor Evans that the longest transmission line, in the early time, was up in Deep Creek and down to the city of Riverside. That was a world's record at the time. Think of it! Today they are sending it from the southern part of Nevada down through El Cajon Pass, and down through the valley, to El Centro, and across the sand hills to Yuma and down the Yuma Valley to the Mexican border, and pumping the waste water back into the river down there 600 miles from the source of the power. No one can say that that is the limit, either. The highest present transmission voltage is 220,000-they started originally with about 125,000 volts, and they have gradually worked up now until it is 220,000and the greater the voltage, the quicker it will go, and with the greatest possible amount of loss, providing you do not burn your wire up. The question is to find the material over which you can send a greater voltage. That means a greater distance, because it will go quicker and faster and get there without, any greater cost. In laboratory tests they have found it possible to send a million volts over the wire, and I said to Secretary Hoover, "What does that

mean?" and he said, "Within a year or two, say two years at the outside, they will be sending hydro-electric power a thousand miles, whereas today they are sending it a few hundred."

So we are constantly broadening the area of the country to be benefited by the development of this project. And I want to say this, and this is the difference between distribution of hydroelectric power and coal, oil, or any other fuel. It can be distributed so easily and so evenly. You don't have to break up a train and take out a car, which makes the big terminals of the railroads, in large or small cities, where there is other fuel. You can take off a line and put in a substituted line anywhere where your main line is, and your little city can get the power just as cheap in proportion to the amount of power they require, as your big city. And the industries of the country want to look out on Main Street or Broadway, you know. I hold no brief for Los Angeles, I represent all the cities in my territory. And because I believe the electric energy is going to put the little place on terms of equality with the big place, is the reason that I am so heartily in favor of this project.

That is what hydro-electric power assumed that industries which want 160 acres of land to spread out upon, and to put a plant the way they want to put it, and who do not want to see any congestion are not going to locate in a big city, they will put their plant in a small city, provided they can get the power proportionately as cheap as in the big city. And it can easily be done.

So there is the possibility. No one can say how many industries are going to be arought here. A hundred thousand skilled hands are going to have to come to California to man these new industries, and with them come their families. And when you have had added that family, you will

have no more strikes or those things that operate in that fashion,

And what does population mean? Take the farmer. If we pick up St. Louis, Pittsburgh, or any one of some other cities. and plant them down in the Southern part of California, you have brought about a market in which the farmer can sell his own product, without having to ship it to a distant point. You have brought to his door the great market, so that he can sell here at home to these people of the families who want his product, instead of having to pay the railroads what is today practically the whole profit of agricultural products in California, the cost of shipping back to Pittsburgh or St. Louis or Kansas City, or wherever it may be. That is one thing.

Another thing is, if you own a city lot, if anything tends to the doubling of the population of Southern California within ten years, you are going to double the value of your property. Why is a lot in New York City worth more than a lot in Coronado or San Diego? It is because there are a thousand people who desire to possess that lot, a thousand people who want to use that lot and patronize a store there to ten people who will pass or want to use one here. That is it. It is the number of people that want to use it that makes the difference in the value of it. If we double the population of Southern California, you are increasing the value of every foot of land agriculturally in Southern California.

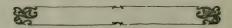
What about the North? I think the time will come, as this river is progressively developed, one time after another, as there is this about the canyon, there are at least 12 dams possible to be developed and which will be developed in time just as rapidly as the need for them is demonstrated, when power will be transmitted to the thousand mile limit, as suggested by Secretary Hoover, and the North will be benefited as well as the

South. In the meantime, this is of course, this use of this power in the South, going to release a certain amount of electric energy here which will go up to the North. I read in a San Francisco Chamber of Commerce paper a magnificient statement of what the Boulder Dam means to Northern California. It does not necessarily mean that they will get the power at this time, but they will get other power, which is just as good, turns their mills just as well as do those in Southern California.

So the whole state is bound to benefit by the inauguration of the project. And I say again, in closing, that this project means more than anything that has been. more than the gold that was discovered in California, because it will in time go, and more than the oil-and may I pause there to say a word about oil? I have just returned from a three-day investigation of that subject. Some people are inclined to dispute the statement made by the United States Government that the oil of the world, and particularly of the United States, is limited, and that within a very definite length of time, the oil will be exhausted, and there has been made the statement that, if the oil could be gotten out, the total supply would be gone in 20 years, but assuming that is a mistake, and assuming it is not true, and suppose they are 100% wrong, and there is enough to last for 40 years, what is 40 years in the life of a nation? I just visited the three greatest oil fields in the country, Santa Fe Springs, Huntingdon Beach, and Signal Hill. They are the

three greatest. The State of California produces one third of all the oil produced in the United States, and one fourth of the oil produced in the world. But the faster you get it up and use it, the sooner you exhaust the supply, because everybody knows that nature is not now engaged in re-creating oil, and as soon as we have exhausted what we have, then we will have to go to something else. Bryan says, "We will furnish the substitute." But here is the thing: Think of the millions, the big billions, the trillions of wheels that are spinning and that must continue to spin to satisfy our complicated modern civilization, and think of the barrels and barrels of lubricants that will be required to keep those wheels spinning. And remember that when we have wantonly, extravagantly, wastefully burned up the crude oil of the country, we have burned up the principal lubrication of the world. Are you going to go out and raise caster beans, to supply the want? It is impossible. There is the greatest tendency to put your finger upon and a tendency from which to keep.

Now, I say that when these benefits that I have touched upon but hurriedly and in but a very weak sort of way, are realized by the people, I do not see how the people of California can permit any influence or any corporation, because of unselfish greed or desire to capitalize those things, to stand between them and this great prosperity which is, if they but take hold of it. (Applause.)



Regional and Metropolitan Planning Principles, Methods, Co-operation

From an article by GEORGE B. FORD of New York

What Is Regional Planning?

A farming village can be complete in itself. Within its political limits it can have nearly everything necessary for the complete functioning of its community life. The people who use the stores and industries in the center can often be supported by the surrounding farming belt, all within the limits of the municipality.

However, as the village grows to a town and the town grows to a city rarely are the corporate limits of the municipality expanded to the point where they include the whole surrounding contributory area.

Controlled as it is by our State laws, the planning of cities and towns has been confined so far to their often arbitrary corporate limits, regardless of the fact that the metropolitan area as an economic unit bears little relation to these limits.

Therefore the logical next step in city and town planning is to find a way of controlling and directing the development of the whole contributory region in the common interest of all living within it. Study of this subject has brought us to the following general conclusions:

- 1. The character and direction of growth of contributory areas beyond the city limits should be controlled by a Metropolitan or Regional Planning Commission.
- 2. Such a commission should include official delegates from each municipality affected. Each municipality should contribute to the support of the work on a pro rata basis, or if that is not feasible, it should be supported by private subscription.

- 3. The commission should cause a regional plan to be made which should include every physical feature which could affect more than one municipal unit. It should be made for many years to come and such a plan should be officially recognized by each of the municipalities affected by it.
- 4. No project affecting more than one community, be it for a thoroughfare. bridge, transit line, railroad, waterfront development, park, public or private reservation, subdivision, building code or zoning ordinance, should be executed without having received the sanction of the Regional Commission as well as of the local hodies affected.
- 5. All physical improvements affecting more than one community should be paid for by prorating the cost among the municipalities interested.
- 6. If in a given case the State Constitution or laws prevent or hamper any of the above operations, steps should be taken to amend them.

How Regional Planning Differs from City Planning.

Regional or metropolitan planning is the co-operative solving of problems common to the various municipalities within a given area. Any service or feature that can be made and should be used by only one municipality should not be considered in regional planning unless its location or character is detrimental to the region or to some other community.

In cities of exceptionally large area in proportion to their population, like Los Angeles, with its 350 square miles, or even Cincinnati, with its 72 square miles, or Baltimore, the city plan covers most of the contributory area.

This contributory area goes to the limits of the commuting belt, and includes all those communities which are daily dependent on the central city for their livelihood, social life or for the supply of commodities. In Buffalo, Boston, St. Louis and Cleveland this area has a radius of 20 to 25 miles; in New York the radius is 40 to 50 miles; in New Haven, Norfolk and Omaha the radius is about 15 miles.

Zoning.

In cities like Cleveland, Boston, New Haven or Philadelphia, each relatively small in area, with a large number of well-developed suburban or satellite municipalities immediately adjacent, certain problems of regional or metropolitan planning become quite serious. For example, a number of the cities and towns around Cleveland have been adopting stringent building zone ordinances which often exclude all industry and severely limit the spread of business. In other words, they have zoned against the city of Cleveland, which will thus be obliged to provide common economic facilities for the surrounding communities. The 40-odd municipalities around New York City that have adopted zoning ordinances have each naturally framed them to protect their own local interests, although perhaps unintentionally doing harm to other communities and to the region as a whole.

Building Codes.

Building codes have been generally adopted by the smaller municipalities surrounding large cities, but no two are alike. Some are far more stringent than others. The result is an unwarranted confusion which tends to waste and often seriously affects the orderly expansion of housing facilities throughout the area.

There are now many features of building construction that have become standardized in practice. These should be consolidated in State codes.

Subdivisions.

Each city and town grows by the accretion of subdivision plats. As the land within the corporate limits of the central municipality is more and more developed. these plats extend into the territory beyond. Already some States, such as Ohio, New York and Virginia, have recognized how necessary it is that the city should control the layout of these plats from three to even fifteen miles beyond the city limits. The reason for this control lies in the fact that as the city grows, the problem of getting in and out of the city by means of radiating thoroughfares becomes more and more serious. Unrestricted subdivision platting often renders impossible the cutting through of new traffic ways. However, these plats can be so laid out that they will fit in with the development of a system of thoroughfares that will satisfy the needs of the region for a great many years to come and so that it will never be necessary to plow thoroughfares ruthlessly across existing built-up subdivisions. On the other hand, it is unfair for the central city to impose its plan on the surrounding communities without their sanction.

The Cleveland Metropolitan Platting Commission, authorized by the State law, points the way. It was to consist of official delegates from each municipality in the metropolitan area whose common platting of highways and control of all plats was to have been supported by prorata assessment. The creation of such commissions is of the greatest importance, but to avoid overlapping such commissions should be merged in the more inclusive Metropolitan Planning Commissions.

Thoroughfares.

The federal, state and county highway systems now current throughout the

(Continued on Page 481)

Hydro-electric Superpower System

A Warning and an Answer

By S. C. EVANS, Mayor, Riverside, California Executive Director Boulder Dam Association

"Hands off the superpower project." was the warning to the United States Government by Gen. Guy E. Tripp, chairman of the Board of Directors of the Westinghouse Electric and Manufacturing Company, during an address before the convention of the National Electric Light Association here today (New York, June 6, 1923.)

Why such warning—Is it to prevent the Government being injured, or is it a threat of punishment.

There are sane and reasonable public ownership advocates of concrete projects, and there are plenty of those who advocate the municipal ownership of all activities, but too often without any sound plan.

There are those who advocate private ownership always, as opposed to public ownership, and the great majority of this group never differentiate on any particular project—there is a vast difference between an investigated, carefully considered, ably approved, economical and fundamentally sound project which has its best solution under Government or Municipal ownership, and the wholly visionary, general and often wild proposition of the out and out no matter at what cost or at whose cost municipal ownership advocate.

It is the fact that people are beginning more and more to center attention on specific and exceedingly definite municipal ownership projects, rather than scatter and include everything in sight, that brings these "Warnings" Power, Light and Water have taken their place with Schools, Libraries, Playgrounds and Parks.

The writer followed the "Roosevelt Dam," was present at its dedication and knows a little of its success during all these years; and yet it was built by Government in spite of "Warning."

The Colorado River development, and especially its first proposed unit at Boulder Dam, will be one of the big undertakings worth while by our Government, and the hydro-electric power therefrom should be owned, distributed and used for the benefit of all the people; and such development, ownership and use should not pass into private ownership, any more than should Yellowstone or Yosemite Park

Who can conclusively say, as in above dispatch, "obviously no municipality can properly own any part of a power system that extends far beyond its boundaries, and is interstate, even international in character,"—"Nor for the same reasons can a State."

This statement, if true, would prevent the Colorado River development under the Fall-Davis Report, and the Johnson-Swing Bill as it will come before the next Congress.

Times do change, and without being extreme, and without advocating abstract municipal ownership, there are certain well defined tendencies and sane, reasonable and able expressions by large groups of users of water and of hydroelectric energy, cities, agricultural units, farm bureaus, irrigation districts, etc.; which strongly advocate these superpower developments by the United States Government, and they are bound to come in an orderly manner.

The writer has no sympathy with

wholesale and unreasoning condemnation of public utility companies, but some of these must give way soon, and in time many may pass to public ownership in an orderly way.

In the nature of things they developed first, they are reasonably well regulated by State Laws in California, and until at least our State tax system is changed we have little to complain of, as we ourselves have largely made the laws under which these companies serve us.

However, in cases like the present Long Beach gas situation, as in the Los Angeles water and electric ownership, private enterprise wages a losing battle.

Why, indeed, should we tear ourselves to pieces about what concerns us so much —as individuals we give way to new roads, wider roads, to parks and other public improvements which at times condems even a home—why should not private water and power and gas companies give way to the public need when specific and favorable conditions show that a city, a state or a group of Municipalities can be best served by public ownership—This is not unnecessary antagonism, nor injustice — Companies should be paid a fair price for that which

the people can use, and when so paid the corporation members as a part of the people can enter finally no legitimate objection.

No one man nor group of men can serve any such "warning," and if insisted upon it but means a quicker alignment of these reasonable and legitimate functions of our Government against those who seek to prevent the people themselves, in any capacity from owning these tremendously valuable hydro-electric systems, for which they will pay and the power from which will be very much cheaper than any other that can be elsewhere purchased. The Boulder Dam Association is one of these agencies, composed of Municipalities and other governmental units, irrigation and agricultural interests, American Legion and Spanish War Veterans, Civic Improvement Organizations, Labor Unions, etc., which seeks economically, sanely and ably, such development by the Government: and we expect to succeed largely because our project is just, is economically sound. is needed and will be approved by the great majority of the people of the entire Southwest-those of Colorado, Wyoming, Utah, Nevada, Arizona, New Mexico and California.

Boulder Dam Meeting at Santa Ana

A membership meeting was held at Santa Ana all day of the 10th, and was exceedingly well attended and much interest shown.

Prominent speakers from California and Arizona presented the project, which will again come before Congress in December when Representative Swing reintroduces his Bill. This scheme has been carefully investigated and has been recommended by the U. S. Reclamation Service in the Fall-Davis Report. Hydroelectric power can be delivered to the coast at about one half what is being now charged wholesale. Cities, agricultural sections, water companies, Legion

and Spanish War Veterans, Labor and other organizations are vitally interested.

Permanent headquarters have been opened at 801 Junior Orpheum Bldg., Los Angeles. A committee will soon go to Washington. Every City and Farm Bureau should be interested and help this wonderful project along. Imperial County will be permanently protected from floods, vast areas can be irrigated and super-abundant power developed from the Boulder Dam, which is but one of the several Colorado River projects which the Government has in mind under the Colorado River Pact.

PEOPLE AND MONEY IN BIG WAR

"The fight is on between the money interests and the people and the only thing to stop further encroachment on the people and the only thing to stop further encroachment on Lieut. Gov. C. C. Young in a recent address at Los Angeles.

Young said that the dollar, instead of man, ruled the 1923 legislature and that the corporations in getting revenge for the King bill have sought to cripple California's splendid institutions.

"I have never been called a corporation baiter," said Young, "But I have seen the dollar put above the man at Sacramento in the interests of the utility corporations. And when a government does that our State is in a bad way.

"The common people of California have stood by and seen their best institutions squeezed and crippled in the interests of a false economy. For, in spite of promises that the tax rate will be reduced their tax bills will not be one cent lower because of the 'economy budget' and they will probably be considerably higher.

"Your railroad commission, which last year by the expenditure of \$30,000 saved the rate-payers \$4,800,000 on the revaluation of one big hydro-electric company alone, is left crippled in its valuation work.

Instead of 50 rate engineers it is now given but 20, and from now on we will

have to take the corporations' word for their own valuation or make a guess at the figures.

"The board of health has been cut nearly 50 per cent in work that is of the highest importance to the state's wellbeing. Rodent control, our bulwark against bubonic plague, is cut out, and so is malaria control, dental and social hygiene work.

"The state board of education has been forced to abandon its important Americanization work and retrench in its physical education department.

"Your normal schools have been made to suffer.

"The state library, which has been getting valuable books out to the people through its county branches at little cost, is cut 33 per cent and will have to abandon much of this work.

"The cut here falls heavy on the blind who depend on the state library for braile books.

"The board of forestry is cut 40 per cent and ex-Governor George C. Pardee, one of the board, resigned, declaring that one might as well cut a city fire department in half and expect it to do its work."

"These are vital functions. They have been ruinously slashed. And the only beneficiaries are the public utility corporations."

AN AMERICAN SCOURGE

Practically alone of all nations, the United States faces the necessity of halting the depreciations of exposure fire; for this most destructive of fire causes is responsible for the conflagrations which have brought disaster upon so many of our cities and is a phenomenon that is

all but unknown in Europe. Indeed, it is not an uncommon experience for some of the densest centers of population in England and France, Italy, Belgium and other old world countries to go through an entire year without having, at most, more than a dozen fires escape control and

extend even to other floors of the building of origin. Much less are these cities accustomed to the sight of fire spreading to neighboring structures; in fact, the percentage of outbreaks that are confined to a single room is little short of miraculous.

This remarkable showing is not accomplished through the instrumentality of better fire-fighting facilities; for municipal fire defenses in America are—fortunately—superior, both in training and equipment, to most of those abroad. It is due, rather, to the interplay of several factors, the first of which is the fire-resistive nature of building materials employed in Europe. Thus, by reason of the scarcity of wood and the plentitude of brick and stone, the completed structure is invested with the initial virtue of fire-resistance.

Supplementing this is the notable strictness of municipal building laws, accepted unquestioningly for generations, which require floor-to-floor cut-offs and the limitation of floor areas. So, by confining the fire in a building already largely of unburnable material, few fires reach sufficient intensity, even with the usual

quantity of combustible contents, to spread. Nor should the average height of buildings be forgotten; the tallest building in London does not exceed eighty feet. Fires in such structures, obviously, are comparatively easy to control.

It is, perhaps, hardly fair, in the absence of restraining laws, to criticise too severely American builders of an earlier day for utilizing those materials which were cheapest and most abundant. But conditions are fast changing. With her lumber resources by no means inexhaustible, America, in the not far distant future, will find herself driven, by the same inevitable necessity that marked their use centuries ago in olden lands, generally to adopt fire-resistive building materials.

There doubtless will come in time, too, a wider acceptance on the part of municipalities of the need for the close regulation of internal construction. It would be the queerest kind of reasoning that could discern real hardship in building laws designed to stop a waste which, from exposure alone, is running at the rate of a third of a billion dollars every five years.

Report on the Decarie Incinerator Submitted by F. L. Decarie

ibinitted by 1. E. Decarie

CITY OF SPOKANE
DEPARTMENT OF PUBLIC AFFAIRS

DEPARTMENT OF PUBLIC AFFAIR:
RALPH HENDRICKS, Commissioner

Crematory Division,

Harlan Coe, Superintendent.

The City of Spokane has recently completed the installation of a new incinerator plant, known as the F. L. Decarie Automatic Incinerator. The plant has been in operation for the past four and one-half months and has more than fulfilled the guarantee.

The cost for labor and fuel in the plant for the month of September, 1923 was 60 cents per ton. The average daily tonnage was 23 tons. There were two days in this month when 33 tons were burned. The plant handled this amount in 12 hours, without additional labor or fuel, at a cost of 40 cents per ton

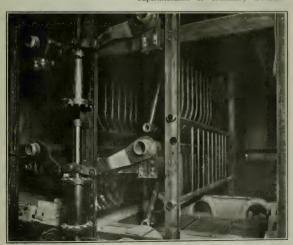
These two days prove that a low disposal cost is possible if the plant could be run to capacity. Under our plan of waste collection it is necessary to operate the plant two eight-hour shifts so

it is impossible to reduce our labor cost when the amount of garbage collected decreases. The labor and fuel cost for the month of September, 1922, with the old plant operating to capacity, was 84 cents per ton. The rated capacity of the new plant is 50 tons in 24 hours. During the official test it exceeded this amount by 20% to 40%. When it is considered that the waste burned here runs 65% garbage and 35% rubbish and paper, with the garbage carrying a very high per cent of moisture, the performance of the plant is remarkable.

One of the very gratifying features of the new plant is the amount of steam generated by the garbage fire and the even steam pressure maintained. At present we are utilizing only a small part of this steam. Radiators have been installed in the crematory buildings and the steam used for heating. Our experience in regard to the power generated proves that it can be put to commercial use to good advantage if enough waste is collected to keep the plant operating to 65% of capacity. Another feature that is important from a sanitary standpoint is the thorough manner in which the garbage is consumed. The amount of ash per ton is 30% less than with the old plant.

From our experience so far I am convinced that this type of plant will be revolutionary in its effect upon the disposal of municipal waste. Especially will this be true in cities that collect enough waste to operate a plant of 100 tons capacity or larger. One man to a shift can operate one of these plants and by proper utilization of power generated a very low disposal cost will be obtained.

HARLAN COE, Superintendent of Crematory Division.



Interior of Decarie Incinerator at Seattle, showing new Oscillating Grate recently installed. The old water jacket equipment being cut away with an acetylene flame to make room for the new and superior equipment.

GOVERNMENT BY THE PEOPLE

By WM. J. LOCKE

John Smith was a good citizen. He paid his bills regularly and sent his childrent to the public school. Above all other things John Smith prided himself on his patriotism. His salutation to the flag was all that could be asked, and when the Star Spangled Banner was sung in a crowd his voice resounded above all the rest.

But with all his boasted patriotism John Smith could not find time to vote on election day. Business was always so pressing that he was unable to give any study to public questions. He excused himself on the ground that his one vote would not be likely to make any difference in the result. He realized, however, that there were many others like him and that if they all voted it would probably make a difference in the result.

On one occasion, after he had been persuaded to officiate in a public meeting, one of his friends chided him on being a "politician." The disgrace was too much and he promptly resigned.

The country is full of John Smiths. They can be found in every town and hamlet. How they swell with pride when the young hopeful recites his history lesson, telling of the sufferings of our forefathers and the struggles of Washington at Valley Forge. But that is as far as their patriotism goes.

They are able to attend the movies regularly and know the history of each player in the big league, but they have no time to vote or study the big problems which confront their country.

John Smith is very proud of his devotion to the memory of him who said that this is a "government of the people, for the people, and by the people," but evidently the saving does not mean anything to him.

Yesterday afternoon he stood for an hour in front of the newspaper office watching the baseball score. To-night there is to be a public meeting in the town hall, but John Smith will not be there. He is afraid someone may again accuse him of being a "politician" and he simply couldn't stand such disgrace.

John Smith can be found by the thousands in every city and county throughthis Union. He is not a good citizen. He is a slacker! Yes, he is worse; *John Smith is a ratior!*

Administrative Officers and Local Politics

On April 14th next municipal elections will be held in all the sixth class cities throughout California. Unfortunately, these elections will be followed here and there by changes in the principal administrative offices, such as the office of City Attorney, City Engineer and Street Superintendent. It is to be regretted that in some cases these changes will be made simply on account of personal or political differences between the encumbents and the new trustees.

A city is very unfortunate when experienced and efficient administrative officers are discharged simply on account of personal differences, and yet that is quite frequently the case. In realization of that fact, administrative officers, so far as possible, should avoid taking sides on local questions, especially those over which much feeling is liable to be engendered. Sometimes a City Attorney or City Engineer will be swept into the vortex of a political scrap despite their utmost precautions, but usually they are able to adopt and retain a neutral position.

Now is the time for all good citizens to get together and endeavor to persuade the most capable men and women to stand for nomination. It is much better to do something in that direction at this time than to stand on the street corner after it is all over and wish that something had been done. It was President Claveland who said that a public office is a public trust, and the office should seek the man rather than the man seek the office. There are many good citizens in every community who can be persuaded to stand for public office if they are waited upon by a delegation of their fellow townsmen and appealed to on the ground of public duty.

We should always bear in mind that, in the last analysis, good government depends on our ability to secure good men and women to do the governing, and they cannot be secured by simply standing still and wishing it. We should also remember that "what's everybodys' business is nobody's business," therefore someone should act. Why not you?

Election Forms

Forms for conducting the April municipal elections have been carefully prepared by the League officials and checked by experts on election laws. A set of these forms will be mailed free from this office to the Clerk of every sixth class city in California about the first of January.

(Continued from page 454)

city in spite of the fact that the people were advised in every conceivable way to vote "No" if they wanted to vote against the recall.

So far as the ballot is concerned the public official cannot have a fair chance in a recall election until the law is changed placing him on an equal footing with the man seeking to replace him.

The recall also furnishes the only instance where a man running for office may be elected by receiving only one vote although he may be opposed by some one else. The law provides that if a majority vote in favor of the recall of a public official the candidate running against him receiving the greatest number of votes shall be declared elected to the office. That means that if a person is recalled if there is only one candidate running against him and if that candidate only receives one vote he is elected. This country of ours is based on the idea that every citizen is entitled to a fair chance in any legitimate enterprise; he does'nt get it if he happens to be a public official in the state of California and he is forced to defend his honor and reputation in a recall election.

Fire Bell for Sale

This bell was for many years used in Coronado and connected with the electrical fire alarm system. It weighs 1020 pounds, is of special fire bell metal, tone B, and completely equipped with mechanism to electrically operate the tapper which strikes the numbers of the call-box from which the alarm is turned in.

This equipment is the product of Meneely and Company of New York and is in good condition. Coronado would be very glad to sell this equipment complete at a discount of 50% or \$368.00.

For further information apply to T. J. Allen, City Manager, Coronado.



First Street, Newberg, Oregon; looking East from Main Street.

Surfaced Eleven Years Ago—No Maintenance Cost—Still In Excellent Condition

Experienced highway engineers have very good reasons for recommending the surfacing of old pavements with asphaltic concrete—

The history of First Street, Newberg, Oregon, is just one of them—surfaced with 2" asphaltic concrete in 1912, it is still in excellent condition and has incurred no maintenance cost.

And there are many other such cases where old pavements have been saved by asphaltic concrete—Mendocino Avenue, Santa Rosa, California; surfaced in 1911—Vincent and Court Streets, Pendleton, Oregon; surfaced in 1914—McAdam Street, Oakland, California; surfaced in 1912—and all still giving good service.

It pays to surface worn-out pavements with asphaltic concrete—because it's adhesive, insuring a thorough bond with the old base—water-proof, preventing seepage to the sub-grade—shock-absorbing, tending to protect the base against the force of impact—and it is durable.

STANDARD OIL COMPANY

ASPHALTIC CONCRETE for durability

CALOL ASPHALT for BEST RESULTS

The Menace of the Wooden Shingle

In nearly every American city of any consequence the mercantile center is surrounded by residence districts constructed almost entirely of wood. In the smaller cities, towns and villages the wooden buildings invade the mercantile center, either composing it entirely or in a greater or lesser degree.

'A conflagration seldom gets under way in a brick, stone and concrete section; it gets started in a wooden section, and if the wind is right and the buildings are dry it gains sufficiently in magnitude to burn the brick, stone and concrete section also.

Every wooden building is a fire hazard in itself, and, if burning, endangers every adjacent building of whatever construction. But most wooden buildings possess a special and particular menace, not only to adjacent buildings, but to other wooden buildings (also possesssing this menace), even when separated by wide open spaces, or fire barriers in the shape of intervening fireproof structures.

This menace is the wooden shingle.

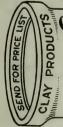
Burning shingles can be carried great distances by the wind or draught of a conflagration and when they alight in their turn upon other dry shingles, they make fearful havoc. The modern shingle is thin, and the machinery which now makes it leaves a fussy surface which after a period of drouth, becomes like tinder. Without shingle roofs flying brands would not be carried over the

BENT CONCRETE PIPE CO.

419 Grosse Building, Los Angeles

Machine-made Concrete Sewer Pipe - Reinforced Concrete Pipe

ANY SIZE PIPE - ANY SIZE JOB - ANYWHERE.



GLADDING, McBEAN & CO.

USE PERMANENT PIPE FOR IRRIGATION DRAINAGE CULVERTS SEWERAGE

CROCKER BLDG. - SAN FRANCISCO WOR'KS-LINCOLN,CAL. brick center of a city by the wind. The wooden shingle furnishes the fire brand and also the tinder which it ignites.

One fire of any magnitude is all an ordinary fire department can cope with at one time. Even in wooden sections a fire can be stopped from communicating to contiguous buildings where the wooden sections on windy days quickly get beyond control, as was the case at Berkeley, California, where there were wooden shingles to carry the fire to other wooden shingles. A dozen fires may thus be started over a radius of a mile or more, while the department is fighting the original fire.

At Marblehead, Mass., twelve separate and distinct fires caused by brands from the Salem conflagration of 1914 alighting on shingle roofs were extinguished by the Marblehead fire department. Marblehead is over a mile from Salem.

But the flying brands of a conflagration do not constitute the only reason for the objection to shingle roofs. There is never a day in the United States or Canada that someone's home is not destroyed or the roof burned off it by the ignition of its wooden shingles from sparks from its own chimneys.

Any kind of a roof is a safer roof than one of wooden shingles. Other roofs may burn, but they will not ignite from sparks, and will not furnish flying brands.

To lock up his valuable papers in fireproof vaults, and to house his wife and children in wooden boxes with tinder roofs, will not always be typical of the American.

It is no hardship upon any class of citizen to compel them to co-operate in public safety. It will not be necessary for any municipality to demand the removal of all shingle roofs immediately. An effective city ordinance may require all roofs constructed in the future to be of fire-resistive material, and that all roofs which shall hereafter require repair to the extent of one-third of their area, shall be replaced with fire-resistive roofs. Thus the transition from present evil conditions to those of reasonable safety may be made gradually and without injustice to anyone.

Sacramento
Capital National Bank Bldg.

San Jose Bank of Italy Bldg. Los Angeles Fay Building

WILLIAM DOLGE & CO.

Certified Public Accountants Municipal Accounting

Audits, Examinations and Special Examinations. Accounting Procedures for Municipal Utilities. Budget Systems Installed

Telephone Sutter 697

369 Pine Street

San Francisco, Cal.

Revised 1923 Street Improvement Forms

We have just completed a most thorough revision of all our legal forms in connection with street improvements to include the changes caused by recent amendments.

Street improvement is now being performed in the majority of our Cities and Towns, and the intricacies caused by our ever changing laws only increases the possibilities of serious legal errors. Our forms have been revised and rechecked by Attorneys and Street Experts, who are well versed in matters of this kind, and therefore, are as near perfect as possible to make them.

The forms are very complete, all legal wording being in full, leaving spaces that the various Cities must fill in, such as dates, descriptions and numbers.

We have put these forms in sets, which are sufficient to complete one street proceeding, or they can be ordered in quantities of various forms.

Why take the risk of errors by making your own forms, when ours will save both time and trouble.

Order one set of forms to-day, and be prepared against emergency.



A. CARLISLE & CO.

Specializing in Street Forms for Municipalities

THE NEXT CONVENTION

As the result of a conference held at Highlands Inn near Carmel on December 8, 1923, the date for the next state convention of the League of California Municipalities was fixed for the week beginning October 6, 1924.

This was done upon suggestion of the delegates present from the Monterey peninsula, and in view of the fact that the month of October is represented to have the best assurance for good weather in that vieinity.

Among those present at this conference were the following: Mayor E. C. Smith of Pacific of Monterey, Mayor E. C. Smith of Pacific Grove, former Mayor James Harper of Pacific Grove, Mayor J. B. Maher of Santa Cruz, Alfred E. Burton, Chairman of the Carmel City Planning Commission, A. J. Mason, City Clerk and Edward Allen, Commissioner of Public Works of Monterey, Charles E. Ashurrer, City Manager of Stockton; Frank C. Merritt, former President of the League of California Municipalities, W. W. Harmon, City Treasurer of San Bruno; President Charles N. Kirkbride of the League and Wm. J. Locke, Executive-Secretary of the League, representing the League of Municipalities.

Upon behalf of the local organizations interested in the entertainment of the League there were also present Fenton P. Foster, manager of the Monterey Peninaula Communities, Inc., a very aggressive organization which has been advertising the Monterey peninaula, and also E. R. Nash, President of the Monterey Chamber of Commerce; A. C. Jochmus, Secretary of the Pacific Grove Chamber of Commerce; R. C. Devec, realtor of Carmel; Messrs. J. Lawrence Toole and J. Beaumont of the Hotel Del Monte, John B. Jordan of the Pine Inn at Carmel, E. H. Tickle of the Highlands Inn, Allen Griffin, editor of the Monterey Herald and W. L. Overstreet, editor of the Carmel Pine Come.

It was arranged that the convention will be held at the Hotel Del Monte. Members of the League will recall the former successful convention held at the Hotel Del Monte and the management assures the city officials that every effort will be made to make the coming convention the most successful ever held by

the League.

The conference at Highlands Inn had certain features of a League convention in itself, addresses being made by those present on a number of subjects of value to those interested in municipal affairs.

Announcement was made that a series of regional conferences will be held throughout the State of California by municipal officials between now and the date of the next convention, and President Kirkbride stated that it was his desire that as the result of these conferences a definite municipal program could be developed for adoption by the next state convention, which program would serve as a basis for the activities of the League during the succeeding year.



PARAGON Fire Hose

"Anything less than the best in fire hose is a losing investment."

United States Rubber Co.

EUREKA FIRE HOSE DEPARTMENT 1104 I. N. VAN NUYS BLDG. LOS ANGELES. CAL.

> 812 SEABOARD BLDG. SEATTLE, WASH.



GRIFFITH COMPANY

Owners of
FAIRCHILD-GILMORE

WILTON CO.
Paving Contractors

Rooms 500-504

Los Angeles Railway Building

Los Angeles

EDWARD GLASS

ARCHITECT

UNDERWOOD BLDG. SAN FRANCISCO



TRIDENT METERS FOR ALL SERVICES

Split Case Meters for Warm Climates
C. I. Breakable Frost Bottoms for Cold Climates
Hot Water and Oil Meters. Crest Meters for Large Flows

TRIDENT DISC

Sold 158,000 in 1921

A record unsurpassed in the history of the Meter Business

MANUFACTURED BY

NEPTUNE METER CO.

NEW YORK

PACIFIC COAST BRANCHES AT PORTLAND, SEATTLE, SPOKANE, SAN DIEGO

LOS ANGELES OFFICE AND WAREHOUSE 701 East Third Street



TRIDENT CREST
SAN FRANCISCO OFFICE
320 Market Street

BURNS & McDONNELL

Engineering Company
CONSULTING ENGINEERS

Water Supply, Waterworks, Sewerage and Sewage Disposal, Power Plants, Gas Plants,
Valuations and Rate Investigations of Municipal Utilities

LOS ANGELES, CALIF. Marsh-Strong Bldg. KANSAS CITY, MO. Interstate Bldg.

N. CLARK & SONS

INCORPORATED 1889

Manufacturers of

ARCHITECTURAL TERRA COTTA, PRESSED BRICK

VITRIFIED AND TERRA COTTA PIPE

HOLLOW TILE FIRE PROOFING

FIRE BRICK TILE AND KINDRED CLAY PRODUCTS

Office: 112-116 Natoma St. WORKS: WARNEDA SAN FRANCISCO

PIPE TANKS CULVERTS

For PERMANENCY use STEEL For QUALITY buy "WESTERN"

We furnish Pipe from 1-16" to 1" thick in any diameter.

WESTERN makes STEEL TANKS for all purposes.

Designed, Fabricated, Erected anywhere on the Pacific Coast.

WESTERN CORRUGATED CULVERTS will give service heretofore unknown, as WESTERN CULVERT METAL is of unequaled rust-resisting, non-corrosive Quality. You will find nothing but "WESTERN" Culverts under the State Highways.

Let Us Figure Your Specifications

Western Pipe & Steel Co. of Cal.

444 Market Street SAN FRANCISCO 1758 N. Broadway LOS ANGELES

TAFT

BAKERSFIELD

FRESNO



22,000,000 People Live in Zoned Cities

DEPARTMENT OF COMMERCE WASHINGTON

More than 22,000,000 people, comprising 40% of the urban population of the United States, live in 183 zoned cities, towns and villages, according to a statement made public today by the Division of Building and Housing of the Department of Commerce.

During the first eight months of this year 54 municipalities, with more than 6,500,000 population, have adopted zoning ordinances. This indicates the greatest progress in zoning that has ever been made during a similar period. More than two-thirds of the 183 zoned municipalities have been zoned since September, 1921.

Neighborliness in the use of land is said to be the keynote of zoning. The home owner is protected from the intrusion of the junk yard which for no good reason might be moved into his neighborhood, and business and shopping districts are protected against noisy factories. Such measures should provide for the use of the different kinds of land and districts within a city for the purposes to which they are best adapted, and allow for orderly growth of commercial and industrial districts. They accomplish their purposes by regulating the height of buildings, the area of the land that they may cover, and the use to which they may be put in the different districts of the city or town.

The complete list of zoned muncipalities, as of September 1, 1923, with references to the state acts under which zoning is permitted, may be obtained from the Division of Building and Housing of the Department of Commerce, Washington, D. C.

Armco Part Circle Corrugated Culverts

STRONG

SERVICEARLE

LASTING



A Standard form of Surface Drainage in a Hundred California Cities

CALIFORNIA CORRUGATED CULVERT COMPANY

409 LeRoy St., Los Angeles

5th and Parker Sts., W. Berkeley



"Oranges, Oranges, who wants to buy my Oranges?"

Such was the peddler's manner of crying out his wares some time ago as he sold to the housewives in a little town.

To-day, the California fruit grower finds that the motor truck and good roads are indispensable to his business.

Whether the road be sandy loam sprayed with Gilmore Road Oil to make it compact, or a long and much trafficked highway of rock macadam and road oil, it must endure.

GILMORE ASPHALTIC ROAD OILS save money, whether you as a fruit grower need them on your ranches, or you as a taxpayer use the county highways as feeders from your ranch to the railway depot.

GILMORE OIL COMPANY

700 I. N. VAN NUYS BLDG. LOS ANGELES, CALIFORNIA

PACIFIC MUNICIPALITIES

(Continued from page 484) country are going far to solve the rapidly growing problems of intercommunication between municipalities. However, within most metropolitan areas such control is inadequate. The result is a series of tortuous and often much too narrow traffic ways leading in and out of the city and from one suburban center to A Metropolitan Interurban another. Planning Commission could plan to meet this situation as did the Newark Conference on Interurban Improvements, each local city or town engineer contributing his time as needed. The cost of execution of the metropolitan highway system should be prorated over the area as is the

metropolitan sewer, water or park sys-Traffic Regulation.

tem about Boston.

Traffic regulations in the various cities and towns are often widely different from one another. This is extremely confusing to the through motorist. Therefore, it is desirable that uniform regulations should be worked out for a whole area similar to those now being worked out for the State of Ohio by a committee recently appointed by the State Legis-Standardized national regulation should be the ultimate goal.

Parking Control.

The control of automobile parking is likewise a regional planning problem in so far as those driving from one town to another on business or pleasure have difficulty in finding a place to park their cars. On the other hand the encumbrance of main traffic ways by local parking often retards through travel, and to the extent that it does should be controlled by the Regional Planning Commission.

Bridges and Viaducts.

Locating bridges and viaducts is a regional planning problem in so far as they facilitate intercommunication between municipalities, especially where they cross, as they often do, the border line between two communities. In such cases their location and the layout of their approaches should be determined as a part of the regional plan.

Interurban Trolleys and Buses.

Interurban transit lines and bus lines present distinctly regional planning problems because they often provide the chief means of intercommunication between communities or between the suburbs and the city. The long distances that have to be traversed in going from the central city to the outlying communities often necessitate the provision of rapid transit



BEAUTIFUL LAWNS

Easily and Economically Kept Beautiful with our Modern Mowing Machinery

MOWERS FOR HAND-HORSE-POWER OR TRACTOR USE

H. V. CARTER MOTOR CO.

San Francisco 52 Beale Street

SOLICIT MUNICIPAL ORDERS



VITRIFIED CLAY SEWER PIPE AND FERGUSON SEGMENT SEWER BLOCKS THE PACIFIC CLAY PRODUCTS, INC.



600 AMERICAN BANK BLDG.

LOS ANGELES, CALIFORNIA



It's the Last Fraction of Control

that often saves the motorist. And with Concrete pavement, that fraction is available for you.

Good brakes, good tires, good driving—all are necessary, but above all there must be a skid-proof pavement.

Concrete Streets are skid-proof. Tires can grip the firm, gritty surface even in wet weather.

Concrete is clean, permanent, hole-proof a pavement after the motorist's and home owner's own heart.

Our Booklet R-4 tells other interesting things about Concrete Streets. Write for your copy.

PORTLAND CEMENT ASSOCIATION

785 Market Street San Francisco, Calif. 548 South Spring Street Los Angeles, Calif.

A National Organization to Improve and Extend the Uses of Concrete

Offices in 23 Other Cities

facilities, such as the Hudson tubes for the Boston elevated system, which take large numbers of commuters quickly from the city to an outlying distributing point, from which they continue to their destination by trolley or bus. Where trolleys or buses follow a main traffic way, and especially where both are running in competition on the same street, they often congest through traffic. These are all problems that can only be solved regionally, as is also the fixing of fare zones, for it is just as logical that trolley and bus fares should vary with the length of ride as it is for steam railroad fares.

Railroads.

Obviously the location of railroads and of their passenger and freight stations and vards is a regional planning problem, for they should make it easy for the commuter to get back and forth to town and for commodities to be delivered locally. At the same time the railroad rights of way and vards should be so located as not to interfere with the reasonable growth of the individual communities through which they pass. They should not be allowed to create "Chinese walls." They present, too, a serious problem where they cross thoroughfares, for it is obvious that all grade crossings should be eliminated where there is any considerable density of traffic on either the railroads or the thoroughfares. Smoke is a problem, especially in suburban residential communities, and therefore the electrification of the railroads where they pass through such towns becomes a regional planning matter. Again, it is evident that freight approaching or leaving the city should cause as little congestion as possible. This often suggests the provision of belt lines or intercommunicating lines so that through trains can be sent around the city instead of across it and so that freight cars can be spotted on the siding or yard nearest to the consumer. This again means careful planning by a Metropolitan Commission working in harmony with the railroad companies and at the same time coordinating these studies with the rest of the plan.

Waterways.

If the metropolitan area is situated on the ocean or on a navigable lake or river. the waterfront tracts best suited to commercial and industrial use should manifestly be developed for that purpose regardless of the arbitrary corporate limits of any individual municipalities. This can be done only by a regional port authority, as in the case of Portland, Ore., New York or London, but unlike these cases such plans should form an integral part of a comprehensive metropolitan plan. This should include a study of the accessibility of these waterfronts by truck and by rail and the reclamation of marshes and bottom lands.

Aviation.

With the growing use of aeroplanes, provision must be made nearer the larger cities for adequate landing fields easily accessible from the central city. From the standpoint of topography there are usually a limited number of tracts that are suitable. Therefore, as a part of a regional plan such possible fields should be preserved for aviation use and the thoroughfare system should be connected with them for ease of access.

Sanitation.

The more communities are grouped the more difficult it is for each separate municipality to provide its own water supply and sewerage and refuse disposal. Stream pollution becomes more and more of a menace. The only alternative is a co-operative development of common facilities such as has been worked out by the Metropolitan District Commission about Boston or by the Cuyahoga County Sanitary Commission about Cleveland.

"Municipal Record," San Francisco.

INDEX TO VOLUME XXXVII

A STATE OF THE STA	-
Accounting Systems for Municipally Owned Utilities, by George Wood	375
Acknowledging Art as an Objective of City Planning, by John W. Mitchell	422
Adjusting Salaries to the Cost of Living	185
Administrative Officers in Local Politics, by Wm. J. Locke	470
Advantage of Portland Cement Roads	9
Alameda City Health Center, The, by Zdenka Buben	302
Aldrich, Lloyd, on The Test Highway at Pittsburgh	381
Amendments to the Constitution of the League	337
An American Scourge	467
Aronovici, Carol, on Traffic Control and Zoning	409
Asbestophalt Pavement, by August E. Schutte	341
Asphaltic Coating for Water Pipe, New Method of Applying Discovered	117
Asphaltic Concrete Rates in California, by F. E. Eastman	138
Asphaltic Concrete Surfacing for Caliche, Rock and Gravel Roads in Arizona, by George	
Apperson, Jr	175
Ballot, Preferential, Result of in Selecting Topics for the 1923 Convention.	83
Daniel, Fredericki, Result of the Selecting Topics for the 1925 Convention.	
	225-227
Blake, Dr. C. L., on Municipal Distribution of Milk	369
	106
Boulder Canyon Dam, What It Will Do for California	455
Boulder Dam Meeting at Santa Ana	. 469
Boulder Dam Project Resolution Respecting	338
Boulder Dam Meeting at Santa Ana Boulder Dam Project, Resolution Respecting. Bryan, Milton, Address of, on Initiative Amendment No. 30.	147
	302
Buben, Zdenka, on Alameda City Health Center, The	302
Duaget Experience of Cantornia Cities, by wm. Doige	. 217
Budget Experience of California Cities, by Wm. Dolge Budget, Value of, by Clyde L. Seevey	17
Building Ord nance, A Model Capital Buildens, the Increase of Under Private Ownership	19
Capital Burdens, the Increase of, Under Private Ownership	85
Carmel-By-the-Sea, by A. C. Jochmus	451
Charter, Decisions on.	0.4
Cheap Electricity as a Population Builder.	386
Cheaper and Better Houses, Object of Commerce Department Report	104
Chief Listin Classes, Object of Commerce Department Report	104
Chief Justice Clark on Public Ownership	3
Chimneys and Flues, Proper Lining for	102
City Cleaning Services on Strictly Municipal Basis. City Manager Form of Government in Alameda, California, by Clifton E. Hickok	54
City Manager Form of Government in Alameda, California, by Clifton E. Hickok	261
City Manager, Problems of, by Clyde L. Seevey	15
City Managers Number Age and Experience of	272
City Managers, Number, Age and Experience of. City Managers of California Organized, by Clifton E. Hickok	431
City Planning, Acknowledging Art as an Objective of, by John W. Mitchell	422
City Planning, Acknowledging Art as an Objective of, by John W. Afternell	
City Planning and Zoning, Manual of Information on, by Theodora Kimball.	447
City Planning and Zoning, the Law of, by Frank Backus Williams	359
City Planning Commission, Why a, By G. Stanley Whitehead	206
City Planning, Getting Results In. by Chas. A. Sheeney City Planning, the Need for, by Lawson Purdy	127
City Planning, the Need for, by Lawson Purdy	166
Clark, Chief Justice, on Public Ownership	3
Cleansing Services on Municipal Basis	54
Coal Strike of 1922, The	
Colorado River Project, Discussion on, by S. C. Evans.	3
	465
Convention, the Next, Report on Preliminary Conference.	476
Comparative Gasoline Consumption and Tractive Resistance on Pavement Surfaces	178
Conclusion of the Pennsylvania Highway Conference	145
Concrete Carries Heavy Traffic at Wholesale Terminal, by Gerald Fitzgerald Concrete, How to Make Good	. 55
Concrete, How to Make Good	247
Concrete Roads	9
Concrete Roads. Constitution of the League, Amendments to.	337
Constitution of the League	005
Construction, Quality.	208
Convention Program of the 25th Annual Convention. Co-operation, Impossibility of Between Government Agencies and Privately Owned Pul	285
Co-operation, Impossibility of Between Government Agencies and Privately Owned Pul	Hic
Utilities	119
Coronado, Convention City of 1923 43-123-163-203-	205-245
Council Meetings at Night, by Clyde L. Seevey	31%
Councilmen, Salaries for	39
Court Decisions of Interest to Municipalities, by Johnson W. Putterbaugh	365
Councilmen, Salaries for Court Decisions of Interest to Municipalities, by Johnson W. Putterbaugh Court Decisions of Interest to Municipalities, Recent	94
, 200	

INDEX TO VOLUME XXXVII-Continued.

	A Chip's
Criminal Law, Decisions on	. 94
Crown of Portland Cement Roads	. 169
Dam, Municipal at Fort Dodge, Iowa. Decarie Incinerator, Report on from City Engineer of Autremont, Canada	. 215
Decarie Incinerator, Report on from City Engineer of Autremont, Canada	435
Dedication, Decisions onDelegates, Register of, in Attendance at the 25th Annual Convention	94
Delegates, Register of, in Attendance at the 25th Annual Convention	. 323
Delos F. Wilcox on The Reason for Municipal Ownership	. 85
Demonstration Proportional Representation Election at Chicago	. 265
Deposit of Public Funds, Resolution Respecting Development of Regional Planning and Subdivision Control, by G. Gordon Whitnall	. 338
Development of Regional Planning and Subdivision Control, by G. Gordon Whitnall	419
Delge Wm on Budget Experience of California Cities	. 169
Development of negoniar Faming and solvinassion control, by G. Gordol vinitiani Dolge, Dr. Win. on Whole Time Health Departments from an Economic Viewpoint Dolge, Win., on Budget Experience of California Cities Dust as a High Explosive Eastman, F. E., on Asphaltic Concrete Rates in California	. 30
Eastman, F. E., on Asphaltic Concrete Rates in California	. 138
Election Law, Decisions on. Election, Proportional Representation in Cleveland.	. 95
Election, Proportional Representation in Cleveland	. 477
Electric Heating, Not Yet a Success, by A. C. McPherson Electricity, Cheap, as a Population Builder Emery, George Hyde, on Proper Lining for Chimneys and Flues Emery, George Hyde, on Segment Block Sewers.	386
Emery, George Hyde, on Proper Lining for Chimneys and Flues.	102
Emery, George Hyde, on Segment Block Sewers	. 297
Estrays, Decisions on. Evans, Samuel C., Response to Address of Welcome. Evans, Samuel C., on Hydro-Electric Super Power System. Evidence in Zoning Cases, by Frank D. Stringham.	. 95
Evans, Samuel C., Response to Address of Welcome	. 331
Evans, Samuer C., on Hydro-Electric Super rower System Evidence in Zoning Cease by Frank D. Stringham	414
Executive Secretary, Report of	. 332
Expansion Joints in Coment Roads	14
Fete of the Sun at Coronado. Financial Conservatism, the Necessity of, in Municipal Ownership. Fire Hazard, the Relation of Building Materiale to.	. 205
Financial Conservatism, the Necessity of, in Municipal Ownership	. 85
Fire Hazard, the Relation of Building Materials to.	. 473
Fire Limits, Importance of	385
Fire Record, American. Fire Record, American. Ford, George B., on Regional and Metropolitan Planning Principles. French, Arthur T., on Injustice of the Present Law for Recalling Public Officials. Fundamentals of Zoning, The, by Edward M. Bassett. Fundamentals of Zoning, as Based on Experience to Date, The, by Judge Albert Lee Stephens	463
French, Arthur T., on Injustice of the Present Law for Recalling Public Officials	. 453
Fundamentals of Zoning, The, by Edward M. Bassett	5-227
Future of Zoning, as Based on Experience to Date, The, by Judge Albert Lee Stephens	. 405
Garbage Collection by the City of Sacramento. Gasoline Consumption and Tractive Resistance on Pavement Surfaces, Compared, by A. B	
Cutter	. 178
Government by the People, by Wm. J. Locke. Getting Rosults in City Planning, by Chas. A. Sheeney. Hall, Judge D. J., on State Regulation of Municipally Owned Utilities. Harbors, Municipal, by Boyle Workman. Harpor, Wm. E., Address of Welcome at Coronado. Health Center, Alameda City, by Zdenka Buben. Health Department, County, Whole Time, from an Economic Viewpoint, by Dr. Wm. Dickie. Health Center, in Not Ver. 8 Success Const.	127
Hall, Judge D. J., on State Regulation of Municipally Owned Utilities	273
Harpors, Municipai, by Boyle working.	. 330
Health Center, Alameda City, by Zdenka Buben	. 302
Health Department, County, Whole Time, from an Economic Viewpoint, by Dr. Wm. Dickie	. 169
Heating, Electric, Not Yet a Success	. 190
Hedges, Mary T., Review of Latest Books on City Planning	261
Hickok, Chiton E., on City Manager Form of Government in Atameda	431
Highway Conference of Pennsylvania. Conclusions of	145
Houses, Cheaper and Better, Commerce Department Report on	. 104
How to Make Good Concrete	. 247
Health Department, County, Whole Time, from an Economic Viewpoint, by Dr. Wm. Dickie Heating, Electric, NOt Yet a Success, Hedges, Mary T., Review of Latest Books on City Planning 338 Hickok, Clifton E., on City Manager Form of Government in Alameda. Hickok, Clifton E., on City Managers of California Organize. Highway Conference of Pennsylvania, Conclusions of Houses, Cheaper and Better, Commerce Department Report on How to Make Good Concrete. Stems, by S. C. Evans Incinerator Decarie Report on Initiative Amendment No. 10, Discussion on. Initiative Amendment No. 30, Discussion on. 60–14 Initiative Amendment No. 11, Discussion on. 60–14 Initiative Amendment No. 11, Discussion on. 60–14 Initiative Amendment No. 11, Discussion on.	433
Initiative Amendment No. 10. Discussion on	228
Initiative Amendment No. 30. Discussion on	7-110
Initiative Amendment No. 11, Discussion on	. 223
Injunctions, Decisions on	. 95
Injunctions, Decisions on. Injustice of the Present Law for Recalling Public Officials, by Arthur T. French Intoxicating Liquors, Decisions on	453
Intoxicating Liquors, Decisions on.	. 90
Kirkbride, Chas. N., Legal Opinions for Engineers.	. 25
Kirkbride, Chas. N., Address of as President-Elect	340
Kirkbride, Chas. N., Address of as President-Elect Latex, Use of, in Manufacture of Rubber.	. 52

PACIFIC MUNICIPALITIES

INDEX TO VOLUME XXXVII-Continued.

	Page
League Constitution	. 293
League Official Not Interested in Publishing House	34
Legal Opinions for Engineers, by Kirkbride	23
Legislation, Affecting Municipalities, Review of	309
Legislative Committee, Resolution Respecting	339
Libel, Decisions on	. 90
Locke, on Administrative Officers in Local Politics.	. 470
Locke, Wm. J., on Government by the People	. 470
Locke, Wm. J., Report of, as Executive-Secretary	. 333
Lock, on Administrative Officers in Local Politics. Locks, (Win. J., on Government by the Peopler Locks, Win. J., Report of, as Executive-Secretary Los Angeles Harbor. Los Angeles Wholesale Terminal, Concrete Pavement Mason, H. A., Report of as Secretary-Treasurer Mason, H. A., on San Francesco's Experience in Establishing Set-back Lines.	. 373
Los Angeles Wholesale Terminal, Concrete Pavement	. 53
Mason, H. A., Report of as Secretary-Treasurer.	. 33
Mason, H. A., on San Francisco's Experience in Establishing Set-back Lines Materials in Portland Cement Roads. McDonnell, R. E., on Muneipal Dam at Fort Dodge, Iowa. McPherson, A. C., on Electric Heating, Not Yet a Success Menace of the Wooden Shingle, The Milk, Municipal Distribution of, by C. L. Blake Mitchell C. W. Model Building Ordinance.	. 11
Materials in Portland Camout Roads	74
MaDowall D E and Manager Date Company	. 4
McDiment, R. E., on Municipal Dain at Fort Douge, Iowa.	. 41:
McFherson, A. C., on Electric Heating, Not 1et a Success	. 190
Menace of the Wooden Shingle, The	. 473
Milk, Municipal Distribution of, by C. L. Blake	. 369
Mitchell, C. W., Model Building Ordinance. Mitchell, John W., on Acknowledging Art as an Objective of City Planning. Mitchell, W. R., on Tree Planting and Its Relation to Municipal Progress. Model Building Ordinance, A, by C. W. Mitchell.	. 19
Mitchell, John W., on Acknowledging Art as an Objective of City Planning	. 42
Mitchell W R on Tree Planting and Its Relation to Municipal Progress	379
Model Building Ordinance A by C W Mitchell	. 18
Motor Exhausts, the Curbing of, on Ferries.	. 432
Motor Vehicle Act, Amendments to	. 8
Municipal Corporations, Decisions on	. 96
Municipal Corporations, Decisions on Municipal Dam at Fort Dodge, Iowa, a Good Investment, by R. E. McDonnell Municipal Development, by Dr. B. M. Rastall Municipal Distribution of Milk, by C. L. Blake Municipal Garbage Collection.	218
Municipal Development, by Dr. B. M. Rastall	45
Municipal Distribution of Milk, by C. L. Blake	. 369
Municipal Garbage Collection	35
Municipal Harbors, by Boyle Workman	378
Municipal Ownership Contrast of With Private Ownership	. 86
Municipal Ownership, Contrast of, With Private Ownership. Municipal Ownership, the Reason For, by Delos F. Wilcox	85
Municipal Ownership, the Reason For, by Delos F. Wilcox Municipal Progress, Relation to, of Tree Planting, by W. R. Mitchell	
Municipal Progress, Relation to, of Free Planting, by W. R. Mitchell	379
Municipally Owned Hydro-Electric Power for Sacramento and Adjacent Territory, by H. C.	
Municipally Owned Hydro-Electric Power for Sacramento and Adjacent Territory, by H. C Bottorff Need for Gity Planning, The, by Lawson Purdy	. 106
Need for City Planning, The, by Lawson Purdy	. 166
Newark, New Jersey, Cost of Pavement Repairs in	. 84
Newark, New Jersey, Cost of Pavement Repairs in New Legislation Affecting Municipalities, Proposed in the 1923 Session of the Legislature	89
New Process of Rubber Manufacture	59
Youvernoone Difficulties in Reporting Public Affaire	55
New Tune of Deep Well Duren A	245
New Process of Rubber Manufacture. New Spanjers. Difficulties in Reporting Public Affairs. New Type of Deep Well Pump, A. Number, Age and Experience of City Managers. Pacific Grove, California, by A. C. Jochnus.	. 090
Number, Age and Experience of City Managers	212
Pacific Grove, California, by A. C. Jochmus	. 403
Pavement, Asbestophalt, by August E. Schutte	. 341
Pavement Laid in Yuba City, by Edward Von Geldern	167
Puvement Repairs Cost of in Newark New Jersey	8.5
People and Money in Rig Wer	487
Distributed Setting on Franch in Con Logislation by I H MaCill	1.24
Pavement Repairs, Cost of, in Newark, New Jersey. People and Money in Big War. Puttsburgh Setting an Example in Tax Legislation, by J. H. McGill Police and Fire Departments, Salaries of.	105
Police and Fire Departments, Salaries of	. 180
Portland Cement Concrete Roads	. 9
Portland Cement Concrete Roads. Portland Cement Prices, by George M. Nelson.	. 135
Portland Cement Roads, Advantages.	. 9
Portland Cement Roads, Specifications.	
	2000
Power System, by S. C. Evans	. 465
Prices Portland Coment	135
Prices, Portland Cement. Program of the 25th Annual Convention at Coronado	285
Program of the 20th Administ Convention at Coronado	
Progress in Street Cleaning, by D. S. Cole	. 368
Prohibition, Decisions on. Proper Liming for Chunneys and Flues Found Essential, by George Hyde Emery Proportional Representation, by Cameron H. King.	. 99
Proper Lining for Chimneys and Flues Found Essential, by George Hyde Emery	102
Proportional Representation, by Cameron H. King	. 22
Proportional Representation Election at Chicago, a Demonstration	. 265
Proportional Representation Election in Cleveland	477
Proportional Representation, Endorsed	. 93
Public Functions by Public Agencies	. 88
Public Health Nurses Association, Resolution Respecting	338
Turne Picture Autors Association, Resolution Respecting	000

INDEX TO VOLUME XXXVII Continued.

Public Official and the Press, by Chester H. Rowel	55
Public Officers, Decisions on	04
Public Ownership of Railroads	
Public Ownership, Only Solution	
Public Utilities, Decisions on Public Utility, Should Milk Be, by Dr. C. L. Blake	96
Public Utility Should Milk Be by Dr C L Blake	364
Publishing House, League Official Not Interested in	34
Pump, Deep Well, New Type of	34
Purdy, Lawson, on the Need for City Planning	166
Putterbaugh, Johnson W., on Recent Court Decisions of Interest to Municipalities	36
Quality Construction	208
Quarty Construction.	
Railroad, Public Ownership of	4
Rastall, Dr. B. M., on Municipal Development. Rate Cases, the Disadvantages Met by Municipalities in Contesting	43
Rate Cases, the Disadvantages Met by Municipalities in Contesting	83
Rates, Asphaltic Concrete in California, by F. E. Eastman	138
Rates, Asphaltic Concrete in California, by F. E. Eastman Reason for Municipal Ownership, by Delos F. Wilcox Recall of Public Officials, Injustice of, at Present, by Arthur T. French	88
Recall of Public Officials, Injustice of, at Present, by Arthur T. French	45.
Recent Court Decisions of Interest to Municipalities, by Johnson W. Putterbaugh	368
Red Light Abatement Act, Decisions on	100
Reed, Fred E., Address on Initiative Measure No. 30	778
Regional Planning and Subdivision Control, the Development of, by G. Gordon Whitnall	419
Regional and Metropolitan Planning Principles, Methods, Co-operation, by George B. Ford	
of New York	463
Regional Plan of New York	448
Regional Plan of New York Register of Delegates Attending the 25th Annual Convention Regulation of Public Utilities, Failure of	323
Pagulation of Public Utilities Failure of	86
Delistaned Consents Payments	37
Reinforced Concrete Pavements. Repairs to Pavement, Cost of, in Newark, New Jersey.	84
Repairs to ravelient, Cost of, in Newark, New Jersey	
Report of Executive Secretary	002
Report of the Secretary-Treasurer.	330
Resolutions Adopted at the 25th Annual Convention.	338
Review of Recent Legislation in California Affecting Municipalities	309
Review of Recent Legislaton in Cantolina Affecting Stantaparties Review of Recent Legislaton in Cantolina Affecting Stantaparties Review of Recent Legislaton in Cantolina Affecting Stantaparties 359-	147
Roads, Asphaltic Concrete Surfacing for	175
Roads of Cement, Specifications.	10
	230
Roads, Portland Cement Concrete	9
Rowel, Chester H., On the Public Official and the Press	57
Rubber Manufacture, New Process of	52
Rubber Manufacture, New Process of Salaries, Adjustment of to the Cost of Living.	185
Salaries for Councilmen	39
Salaries for Councilmen Salaries of Members of the Police and Fire Departments	185
San Francisco's Experience in Establishing Set-Back Lines, by H. A. Mason.	411
	101
School Law, Decisions on Schutte, August E., on Asbestophalt Pavement Secretary-I reasurer, Report of Seevey, Clyde L., on Froblems of the City Manager. Seevey on Valve of the Budget Segment Block Sewers, by George Hyde Emercy.	341
Schutte, August E., on Assestophatt ravement	333
Secretary-Treasurer, Report of	15
Seevey, Clyde L., on Problems of the City Manager.	17
Seevey on Valve of the Budget	16
Segment Block Sewers, by George Hyde Emercy.	207
Sewers, Segment Block, by George Hyde Emerey	
Sewers, Segment Block, by George rivde Emercy Shingle, the Menace of, saa Fire Hazard Shingle Roof of Wood, a Fire Menace.	473
Shingle Roof of Wood, a Fire Menace	20
Silver Creek Project, The	106
Six Years' Accomplishments in Alameda, California, Under the City Manager Form of Govern-	
ment, by Clifton E. Hickok, City Manager of Alameda	261
Specifications for Portland Cement Roads	10
State Regulation of Municipally Owned Utilities, by Judge D. J. Hall.	223
Stephens Judge Albert Lee, on the Future of Zoning, as Based on Experience to Date	405
Street Cleaning Progress in by D S Cole	368
Street Law Decisions on	101
Street Laws Proposed Amendments to	93
Street Law, Decisions on Street Laws, Proposed Amendments to. Street Laws, Proposed Amendments to. Stringham, Frank D., on Evidence in Zoning Cases Swing, Hon. Phil D., On What the Boulder Canyon Dam Will Do for California	414
Swing Han Phil D. On What the Roulder Canyon Dam Will Do for Celifornia	455
Taxation Decisions on	109
Taxation, Decisions on	124
Tax Legislation, ritisourgi octung Example in, 0y 3, it, Metalli,	381
	9
Toms, R. E., on Concrete Roads	178
Tractive resistance and Gasoline Consumption, Comparison on, by A. D. Cutter	~ 100

PACIFIC MUNICIPALITIES

INDEX TO VOLUME XXXVII-Continued.

Traffic Control and Zoning, by Carol Aronovici . 40	9
Tree Planting and Its Relation to Municipal Progress, by W. R. Mitchell 37	79
Twenty-fifth Annual Convention, Proceedings of	
Utilities, Municipally Owned, Accounting Systems for, by George H. Wood 37	
Utilities, Municipally Owned, State Regulation of, by Judge D. J. Hall	23
Voshell, James T., on Concrete Roads	
Water Pipe, Asphaltic Coating for, New Method of Applying	
Water Resources, Investigation 16	
What Our Cities Are Doing 188-258-305-20	
What the Boulder Dam Will Do for California, by Hon. Phil D. Swing.	55
Whitehead, G. Stanley, on Why a City Planning Commission.	
Whitehead, G. Stanley, on Why a City Planning Commission. Whitnall, G. Gordon, on Development of Regional Planning and Sub-division Control. 41	
Whitnall, Gordon G., on Initiative Amendment No. 30.	
Whole Time County Health Department from an Economic Viewpoint, by Dr. Wm. Dickie 16	69
Why a City Planning Commission, by G. Stanley Whitehead.	
Wolf, Guy W., Discussion on Initiative Measure No. 30.	
Wooden Shingles, Danger From 2	
Wood, George H., on Accounting Systems for Municipally Owned Utilities. 37	75
Workman, Boyle, on Municipal Harbors. 37	73
Yuba City, California, Sets a Record, by Edward Von Geldern. 16	37
Zone Cities, Number of People Living in 48	81
Zoning and Traffic Control, by Carol Aronovici. 40	19
Zoning Cases, Evidence in, by Frank D. Stringham 41	
Zoning, City Enabling Acts of 1923, Respecting 36	
Zoning, Single Family District, New Jersey Court Rules Against 35	
Zoning, the Future of, as Based on Experience to Date, by Judge Albert Lee Stephens. 40	





